

SOME ASPECTS OF SANSKRIT SYNTAX

[A study within the framework of Fillmore's case grammar]

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ABSTRACT

This study is an attempt to analyse some aspects of Sanskrit syntax within the framework of Fillmore's case grammar.

It contains seven chapters including the Introduction and conclusions.

In the first chapter the theoretical assumptions of FCG (Fillmore's Case Grammar) are mentioned. Besides this, there is a brief reference to the views of grammarians and linguists about the Sanskrit language, followed by a specification of the scope of this study.

In the second chapter, the case-categories A/D/R/O/F/I/L/SO/GO/Ext/Pa, along with their semantic and syntactic correlates and related problems, are discussed.

In the third chapter NP-asti-NP sentences (i.e. those containing the copula) are considered and the case-categories that may occur therein, are specified. In addition, such NP-asti-NP sentences which are complex structures and involve the process of nominalisation, are described.

In the fourth chapter Genitive constructions (i.e. those which show the genitive inflexion) are taken up. Inalienable and alienable relationships in such constructions along with the process of Nominalisation are discussed.

In the fifth chapter coordination, both derived and phrasal, is considered. The latter as related to comitative constructions, is discussed in detail and the status of the Comitative case (as proposed by Fillmore) is examined.

In the sixth chapter, a discussion of the lexicon as presented in FCG is given. It also includes a list of lexical entries for verbs, phrase structure rules and a selection of important transformational rules.

The seventh chapter sums up the points that have arisen in the discussion of the foregoing chapters.

Finally, a short bibliography is appended.

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KEY TO TRANSLITERATION

<u>Consonants</u>			<u>Velar</u>	<u>Retroflex</u>	<u>Palatal</u>	<u>Dental</u>	<u>Labial</u>
Stops	voiceless	unaspirated	k	ṭ	c	t	p
		aspirated	kh	th	ch	th	ph
	voiced	unaspirated	g	ḍ	j	d	b
		aspirated	gh	ḍh	jh	dh	bh
Nasals			N glottal	ṇ	ñ	n	m
Fricatives							
	voiceless		ḥ	ṣ	ś	s	-
	voiced		h				
Frictionless continuant						labio-dental	
rolled			-	ṛ	y	v	-
				r			
anusvaara			ṁ				
<u>Vowels</u>				<u>Short</u>	<u>Long</u>		
Simple	front	close		i	ii		
		half-open		e			
	back	close		u	uu		
		half-close		o			
		open			aa		
	central	half-open		a			
Diphthongs						ai	au

ABBREVIATIONS and CONVENTIONS

A	Agentive
ab	ablative inflexion
acc	accusative inflexion
C	Case
Com	Comitative
Cop	Copula
D	Dative
d	dative inflexion
Es	Essive
Ext	Extent
F	Factitive
fem	feminine
G	Genitive construction
g	genitive inflexion
GO	Goal
I	Instrumental
i	instrumental inflexion
K	Case-marker
L	Locative
l	locative inflexion
M	Modality
mas	masculine
-mas)	neuter
-fem)	
N	Noun
Nom	Nominalised

NP	Noun Phrase
O	Objective
P	Proposition
PP	Post-Position
Pa	Path
PR	Prompter
Pres	present
R	Receptive
Re	Result
S	sentence
SO	source
T	Translative
V	Verb
VP	Verb Phrase
$X \rightarrow Y$	X is rewritten as Y
$X = Y$	X is equal to Y
$X \neq Y$	X is not equal to Y
$X \Rightarrow Y$	X is transformed into Y
$X \nRightarrow Y$	X is not transformed into Y
(X)	X is an optional element
$[X _]$	X is a case in a case-frame
$[X]$ +Y	X contains the feature Y
$[+Y]$	Y is a positively marked feature
$[-Y]$	Y is a negatively specified feature
$\begin{Bmatrix} X \\ Y \end{Bmatrix}$	either X or Y is selected

$X \rightarrow Y/W - Z$

X is rewritten as Y in the environment following W and preceding Z

 \emptyset

zero: absence of an element/constituent



abbreviation for a string dominated by a constituent X, where the detailed constituent-structure below X is not relevant

?

indicates doubt regarding acceptability.

*

indicates unacceptable construction.

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1. This chapter contains two sections: section I.1 deals with the theoretical assumptions of Fillmore's case-grammar and section I.2 refers to the Sanskrit language and the scope of the present study.

I.1 In this section, it is proposed to present the theoretical assumptions of case-grammar proposed by Fillmore (henceforth referred to as FCG).

I.1.1. The framework of FCG can be constructed on the basis of his undermentioned works:

1. 'A Proposal Concerning English Propositions' (1966a)
2. 'Towards a Modern Theory of Case' (1966b)
3. 'The Case for Case' (1968a)
4. 'Lexical Entries for Verbs' (1968b)
5. 'Types of Lexical Information' (1969)
6. 'The Grammar of Hitting and Breaking' (1970a)
7. 'Subjects, Speakers and Roles' (1970b)
8. 'Some Problems for Case Grammar' (1971)

Of these, the third expounds FCG in detail and still remains the standard treatment, and the eighth sketches the present state of the theory, though regrettably in a very fragmentary manner, in light of the inadequacies that have suggested themselves during the intervening period. However, it is assumed that the third and the eighth, between them, cover the exposition of FCG. The discussion in the succeeding chapters will be based on this exposition.

I.1.2. The notion of case has been treated variously by grammarians and linguists and equated with either (i) 'semantic functions of

inflexional affixes on nouns or the formal dependency relations which hold between specific nominal affixes and lexico-grammatical properties of neighbouring elements'; or (ii) "a statement of the morpho-phonemic reflexes of a set of underlying syntactic relations which themselves are conceived independently of the notion of 'case'." ¹ In the first category comes the description of case-systems of languages like Latin, Greek and Sanskrit; and which have been accepted as the basis for the treatment of case-systems of other languages. In the second category comes the treatment of case in some varieties of generative linguistics which identify 'case' with the inflexional realisation of particular syntactic relationships in the surface-structure. ² Some scholars have insisted on its being related to inflexion. ³

I.1.3. Fillmore, on the other hand, agrees with Hjelmslev in not accepting case as an 'expression in the form of affixes on substantives' ⁴

1. Fillmore, C.J., (1968a), p. 2.

2. Chomsky, N., (1965): "...specified feature [case] is introduced by a rule that does not belong to the base sub-component of the syntax at all but rather to its transformational part" (p. 172); "...the features involved in the case-dimension are certainly added to a formative by rather late transformations (since case often depends on aspects of surface rather than deep-structure" (p. 177); "...case is usually determined by the position of the noun in surface-structure rather than in deep-structure" (p. 221fn. 35) cf. Lyons, J., (1966), p. 218.

"Case (in the language in which this category is to be found) is not present in deep structure at all, but is merely the inflexional realisation of particular syntactic relationships."

3. Cassidy, F.G., (1937), p. 245: "Case will be properly used and will continue to have some meaning only if the association with inflexion be fully recognised".
cf. Lehmann, W.P. (1958), p. 187: "a particular case is non-existent unless it is represented by forms which contrast in a system with others".

4. Fillmore, C.J., (1968a), p. 21; also, Blake, F.R., (1930), p. 35: "the term case-form will be employed for case in its usual sense, while the term case will be reserved for the relationship itself without regard to its means of expression."

and uses case to identify the underlying 'syntactic-semantic relationship' as a deep-structure phenomenon in a natural language.

For Chomsky, Fillmore's case-grammar as 'a semantically justified universal syntactic theory'⁵ is not considered basically different from the earlier version of syntax as put forth in Aspects 'at the conceptual or theoretical level, but rather at the level of application to the particular grammar of English'.⁶

Within Transformational Generative grammar, basically three assumptions about FCG are possible: (i) it presents a theoretically different grammatical description which meets both descriptive and explanatory adequacy, (ii) as an evaluation procedure⁷ it is to be preferred to other types of grammar for a natural language, (iii) it is a grammar which is specific to English. Chomsky has not argued that case-grammar is not applicable to other languages and none of the linguists has given any argument to prove that case-grammar is language-specific and the plea that it is a 'choice of grammar'⁷ for English is untenable. Of the remaining two assumptions, even if the second assumption is demonstrated to be correct, FCG makes a significant contribution. However, it will be examined below whether it meets the first assumption of descriptive adequacy or not.

1.1.3.1. A grammar is descriptively adequate to the "extent that it correctly describes the intrinsic competence of the idealised native

5. Fillmore, C.J., (1968a), p. 21.

6. Chomsky, N., (1970), p. 38.

7. Chomsky, N., (1957), pp. 50-53.

speaker."⁸ Thus a descriptively adequate grammar is not concerned with a limited corpus, rather it accounts for all the grammatical sentence-types as distinguished from utterance-types⁹ which a speaker-hearer produces and understands on the basis of an 'internalised' system of rules. A grammar G_1 is more valuable than a grammar G_2 and reaches a higher degree of descriptive adequacy if it fulfils four conditions:¹⁰ (i) the rules (i.e. description) are so explicit and exact that there is no confusion with regard to what is generated and what is not generated, (ii) it gives only and all the combinations or strings of formatives which are sentences of a language, (iii) it has more generalisations and expresses them with a smaller set of rules. In other words it is as simple as possible.¹¹ A description may be called simple if it makes relevant generalisations and expresses regularities in the language concerned. If two descriptions reach the same level of generalisations the description with the smaller set of rules and/or symbols is simpler; (iv) it is able to associate with a regular and straightforward semantic interpretation. Of these, the first two conditions are better left for verification when the description of the particular language is taken up. The remaining two conditions are fulfilled in FCG as evident from the following discussion.

8. Chomsky, N., (1965), p.24.

9. Seuren, P.A.M., (1969), p. 2.

10. Seuren, P.A.M., (1969), p.12.

11. This condition of a grammar being 'simple', but non-trivial at the same time, is difficult to be met.

I.1.3.2. FCG assumes (i) the centrality of syntax wherein 'the forms of words (formatives) are specified with respect to syntactic concepts'¹² and (ii) specifies the significance of 'covert categories' which exhibit the grammatical properties on the basis of 'selectional restrictions and transformational possibilities'¹² even if the grammatical properties are not morphemically realised. FCG¹³ accepts the distinction between deep structure and surface structure and treats the base-component (excluding the lexicon) as language-universal and not as language-specific. FCG assumes a base-component as a 'semantically justified syntactic deep-structure, not as a syntactic deep-structure of Chomsky.'¹⁴ It advocates that "the grammatical notion case¹⁵ deserves a place in the base-component of the grammar of every language."¹⁶

I.1.3.3. FCG assumes a base-component without any sequential ordering of items. This is opposed to the concatenation-system of the standard theory which implies a sequential ordering in the base structure.¹⁷ Linguists have divergent views in this respect. Halliday

12. Fillmore, C.J., (1968a), p. 3.

13. Fillmore, C.J., (1968a), p. 21.

14. Fillmore, C.J., (1968a), p. 88.
cf. id. (1971), p. 245: FCG does not propose "to eliminate deep-structure altogether, but ... to find a level of syntactic structure which was deeper than that offered by the then standard theory".

15. Fillmore, C.J., (1971), p. 245: "... deep structure cases ... their existence could be discovered and justified by syntactic criteria." cf. (1968a), p. 5: 'semantically relevant syntactic relationships'.

16. Fillmore, C.J., (1968a), p. 9.

17. Chomsky, N., (1965), pp. 124-127.

would favour a sequence-free base-component and Lyons would argue for leaving this question for empirical investigation.¹⁸ Agreeing with Lyons, even if the question is left open in respect of natural languages in general and we do not concede sequential ordering to surface-structure apart from 'stylistic inversion' (which Chomsky concedes to be a surface phenomenon), a sequence-free deep structure appears inevitable for languages like Sanskrit, Greek, Latin. In the case of languages like German and Russian, linguists have tried to show that some order in the deep-structure needs to be accepted.¹⁹

It appears that in order to meet the criterion of descriptive adequacy, a grammatical description of a language like Sanskrit should have a deep-structure free from word-order phenomenon.

I.1.3.4. According to FCG, the base-component specifies that a sentence consists of two constituents M(odality) and P(roposition).²⁰ The M(odality) includes 'negation, tense, mood and aspect.'²¹ The P(roposition) is a 'tenseless set of relationships involving a V(erb) and one or more N(oun)P(hrase(s)).'²² The relationships that the NPs

18. Halliday, M.A.K., (1966), p.227.
Lyons, J., (1966), p.227.

19. Chomsky, N., (1965), p.126.
Ross, J.R., (1970), pp.257-258.

20. Fillmore, C.J., (1968a), p.23.

21. Fillmore, C.J., (1968a), p.23.
cf. Lyons, J. (1966), pp.218, 223: he regards negation, tense, mood as associated directly with the sentence as a whole, and the perfect and progressive aspects as features on the V.
cf. Robinson, J.J., (1969), p.63: she brings in interrogation under M(odality) but removes negation and aspect from it.

22. Fillmore, C.J., (1968a), p.23: he later on (1971, pp.246-47) substitutes V with Predicator (verb, adjective or noun). This revision in the constituents of P is unfortunate as it is proposed without any discussion for or against. In this study P as expanded above (1968a) is accepted.

contract with the V are realised as different C(ases). Rules (i) and (ii)²³ formalise this.

$$(i) \quad S \longrightarrow M \ P^{24}$$

$$(ii) \quad P \longrightarrow V \ C_1 \ \dots \ C_n$$

A C(ase) dominates an NP, K(asus) (case-inflexion) and P(ost)P(osition), which can be indicated by a rule like (iii):²⁵

$$(iii) \quad C \longrightarrow NP \ + \ K \ (+ \ PP)$$

Fillmore has postulated (1968a, 1969, 1971), the following C(ases) with the semantically based definitions given:

1. A(gentive): 'the case of the typically animate perceived instigator of the action identified by the verb' (1968a), p. 24
'the instigator of the event' (1969), p. 116
'the principal cause' (1971), p. 253
2. D(ative): 'the case of the animate being affected by the state or action identified by the verb' (1968a), p. 24
3. E(xperiencer): 'the entity which receives or accepts or experiences or undergoes the effects of an action' (1969), p. 116
'when there is a genuine psychological event or mental state verb, we have the experiencer'... (1971) p. 251

23. Fillmore, C. J., (1968a), p. 24

24. FCG proposes a notation like $X \rightarrow Y$: 'the arrow notation is used throughout, but this should not be interpreted as meaning that the proposal for a case-grammar requires an assumption of a left-to-right orientation of the constituent symbols of the rewriting rules' (Fillmore, C. J., (1968a), p. 24 (f. n. 30)).

25. Fillmore, C. J., (1968a), p. 33: he proposes a rule like $C \rightarrow K + NP$, perhaps, in view of the English language. The PP occurring in certain constructions of Sanskrit, imposes a specific realisation of K.

4. I(nstrumental): 'the case of inanimate force or object causally involved in the action or state identified by the verb' (1968a), p. 24
- 'the case of the immediate cause of an event, or, in the case of a psychological predicator, the stimulus, the thing reacted to' (1971), p. 251
- 'the stimulus or immediate physical cause of an event' (1969), p. 116.
5. Counter-agent: 'the force or resistance against which the action is carried out' (1969), p. 116.
6. F(active): 'the case of object or being resulting from the action or state identified by the verb, or understood as a part of the meaning of the verb' (1968a), p. 25.
- R(esult): 'the entity that comes into existence as a result of the action' (1969), p. 116
7. O(bjective): 'the semantically most neutral case, the case of anything representable by a noun whose role in the action or state is identified by the semantic interpretation of the verb itself; conceivably the concept should be limited to things which are affected by the action or state identified by the verb. The term is not to be confused with the notion of direct object, nor with the name of the surface case synonymous with accusative' (1968a), p. 25

'the entity that moves or changes or whose position or existence is in consideration' (1969), p. 116

'the object case is that of the entity which moves or which undergoes changes, ... a waste-basket, sentences embedded to objects can serve to identify ... the content of a psychological event as with the verbs of judging or imagining' (1971), p. 251

8. L(ocative): 'the case which identifies the location or spatial orientation of the state or action identified by the verb' (1968a), p. 25
9. SO(urce): 'the place from which something moves' (1969), p. 116
'starting point' (1971), p. 259
10. GO(al): 'the place to which something moves' (1969), p. 116
'the destination' (1971), p. 259

Fillmore has suggested additional cases like (i) Com(itative) (1968a, pp. 81-83), (ii) B(enefactive) (1968a, p. 32), (iii) T(ime) (1968a, p. 32), (iv) Es(sive) (1968a, p. 84), (v) T(ranslative) (1968a, p. 84), (vi) Pa(th) (1971, p. 259-260) and possibly (vii) Ext(1971, p. 260 ff).

No attempt is made here to assess the justifiability or validity of one or all of the cases mentioned above. This question is taken up in the sections concerned with specific case-categories.

I. 1. 3. 5. Of the above cases, A, D, O, F, I, L, SO, GO, Ext, Pa, Es, T are postulated in the succeeding chapters. The case-category R(eceptive) is introduced. The status of Com(itative) is examined. Other case-categories are discussed but not retained. ²⁶

26. The case-category Counter-agent (I. 1. 3. 4.) is excluded from this discussion. Because, Fillmore does not discuss it (1969) and he appears to have rejected it later on.

Now, for the present study, the phrase-structure rules (i, ii above) can be restated as follow.

$$(i) \quad S \rightarrow M P$$

$$(ii) \quad P \rightarrow V C_1 \dots C_n$$

where : C_1 = one of A, D, R, O, F, I, L, SO, GO, Ext, Pa, Es, T.

FCG maintains that the case-frame(s) of a verb indicate(s) the relationship(s) in the form of cases that contract between the NP(s) and the V. Thus a verb like 'likhati' (writes) has a case-frame like

likhati : + [A, (I), (L), F —]

The dash indicates the place where the verb occurs, the symbols to the *left* right of it show the cases that can occur with the verb. The parentheses indicate optionality. The symbol '+' in front of the square-brackets, indicates that the frame-feature is positively specified with regard to the lexical item 'likhati'.

According to FCG, the relationship obtaining between a V and the associated NP's in deep structure remains the same irrespective of the final position of these NP's in surface structure. Thus, the case-frame of the verb 'open', to take an example from English, is as follows.

open : [— O (A) (I)]

(i) the door opened
O

(ii) he opened the door
A O

(iii) the key opened the door
I O

(iv) he opened the door with the key
A O I

In addition to the categorial component,²⁷ the base-component of FCG comprises a lexicon. As regards the selection of lexical items, FCG proposes that the selection of the verb should precede the selection of other lexical items.²⁸ Secondly, FCG maintains that subject-objects relations are surface-phenomena.²⁸ Consequently there does not appear to be any need to distinguish between strict sub-categorisation rules and selectional restrictions.²⁹ As a result of these, the lexicon assumes a less complex form.

Besides, FCG proposes that one case-category occurs only once in a simple sentence and occurrences of the same case-category can be conjoined in relation to a single verb.³⁰ In so far as the sentence-embedding is concerned, FCG makes a change in its earlier position³¹ and proposes that embedded \mathcal{A} is dominated by some case-category.³²

I.1.3.6. In sum, the FCG which, according to its proponent, 'should be incorporated into the theory of transformational grammar',³³ lays down the following principles for description.

27. For phrase-structure rules see VI.3.

28. For the details see VI.1.

29. cf. Chomsky, N., (1965), pp. 95, 113.

30. Fillmore, C.J., (1968a), p. 21: '... although there can be compound instances of a single case (through noun phrase conjunction), each case relationship occurs only once in a simple sentence.'

31. Fillmore, C.J., (1968a), p. 32: 'complex sentences involve recursion through the category \mathcal{S} (sentence) under the case-category objective.'

32. Fillmore, C.J., (1971), p. 247.

33. Fillmore, C.J., (1971), p. 245.

- (i) case-systems are universal.³⁴
- (ii) cases are semantically justified syntactic primitives.³⁵
- (iii) 'case-forms'³⁶ or 'surface-cases'³⁷ are language-specific and may be realised by inflexion, pre-/post-positions, and other 'syntactic function indicators'³⁷ like word-order.
- (iv) In a simple sentence one case-relationship occurs only once.³⁸
- (v) Relations of subject and object are ^{surface}subject phenomena.³⁹
- (vi) Only noun-phrases representing the same case can be ⁿcojoined with a single verb.
- (vii) Sentences 'embedded in underlying representations are embedded as occupants of some case role.'⁴⁰

I.1.4. FCG as specified, in brief, above, may need refinements and a detailed formulation of its rules both universal and language-specific ones. Its application to the analysis of natural languages may bring out imperfections which need to be rectified. In fact, Fillmore is aware of these possibilities.⁴¹ Despite these reservations FCG stands as a sufficiently detailed working hypothesis for empirical research to attempt

34. Fillmore, C.J., (1971), p.247: 'the cases identify the roles ... defined once and for all for human languages ...'

35. Fillmore, C.J., (1968a) p. 5; (1971), p.245.

36. Fillmore, C.J., (1968a), p.21.

37. Fillmore, C.J., (1971), p.47.

38. Fillmore, C.J., (1971), p.248: 'one-instance-per-clause-principle'.

39. Fillmore, C.J., (1968a), p.32; (1971), p.247.

40. Fillmore, C.J., (1971), p.247.

41. Fillmore, C.J., (1968a), p.88; (1971), p.246.

a validation of its major claims. The present study is an attempt to test the adequacy of FCG by applying it to the case of Sanskrit.

I.2 This section deals with the following points: in I.2.1, reference is made to the Sanskrit language (the classical language) as distinguished from the Vedic ('vaidika' to be pedantic) language (or Vedic sanskrit); in I.2.2. and I.2.3. the investigations and studies of Sanskrit language and grammar by Indian grammarians and western scholars respectively, are referred to; the treatment of case in relation to syntax, is taken up briefly in I.2.4 and the scope of the present study is discussed in I.2.5.

Interest in
I.2.1. the Sanskrit language whose precise antiquity still remains unsettled,⁴² was revived by the European scholars towards the end of the 18th century.⁴³ The sanskrit language spoken⁴⁴ and understood today is strictly the classical Sanskrit distinct from the language of the vedic texts which is called vedic Sanskrit or the vedic language. The classical Sanskrit language and vedic Sanskrit language are also referred to as 'bhaaṣaa',⁴⁵ and 'chandas',⁴⁶ respectively. It is maintained that the structure of the Sanskrit language (henceforth classical Sanskrit

42. Burrow (1955, p.31) assigns the period 1200-1300 B.C. to the composition of the Rgveda which 'is not likely to be many centuries out, either one way or the other.' Winternitz (1927, pp.290-310), on the other hand, mentions a period in the middle of the third millennium B.C.

43. Burrow, T., (1955), p.6.

44. There are 2,460 speakers who accept Sanskrit as their mother-tongue, according to the Gazetteer of India, Vol.I (1965), appendix VI.

45. Paanini: rules II.2.108; IV.1.62; VI.1.181; VI.3.20; VIII.2.98

46. Paanini: rules I.2.36; I.4.9, 20, 81; II.3.3, 62 cf. Staal, J.F., (1967), p.18.

will be mentioned as such) assumed rigidity, after Paanini,⁴⁷ deviation from which could not be tolerated. Scholars hold the view that the Sanskrit language remains, even today, as fixed by Paanini's rules.⁴⁸

I.2.2. The Sanskrit language has been studied in depth by the ancient Indian grammarians.⁴⁹ The initial motivation was, most probably, the preservation of the sacred and ritual texts through oral tradition which made the study of phonetics imperative for them.

'Niruktam', the etymological composition by Yaaska,⁵⁰ embodies the 'earliest systematic discussions on questions of grammar'.⁵⁰ This system of grammatical analysis reaches perfection in the hands of Paanini.⁵¹ The grammarian Kaatyaayana,⁵² also known as the maker of notes ('Vaarttikakaara'), and Patanjali,⁵³ the writer of the

47. His grammatical treatise, *Aṣṭadhyāyī*, consisting of about 4,000 rules (Pandeya (1938) lists 3982 rules). This work is assigned the period 700-600 B.C. by Goldstücker and Bhandaarakar. Burrow (1955, p.48) mentions 400 B.C. as the period of Paanini's work. Thus Paanini's work has variously been assigned to around 600 B.C. and around 300 B.C.' (Robins, (1967), p.137).

48. Burrow, T., (1955), p.36.

49. For details Belvalkar, S.K., (1915).
cf. Allen, W.S., (1953), p.3: he quotes J.R. Firth: 'without the Indian grammarians and phoneticians ... it is difficult to imagine our nineteenth century school of phonetics.'

50. Burrow, T., (1955), p.48.
cf. Sarup, L., (1920), p.54: his period is mentioned between 700 B.C. - 500 B.C.

51. Bloomfield, L., (1935), p.11: 'one of the greatest monuments of human intelligence' ... 'it describes ... every syntactic usage of its author's speech.'

52. His period is considered to be near about 350 B.C.
cf. Belvalkar, S.K., (1915), pp.28-29.

53. Scholars are definite that his period is second century B.C. (Burrow, T., (1955), p.49); cf. Robins, R.H., (1967), p.140; cf. Belvalkar, S.K., (1915), p.32).

'Mahaabhaasya' (the great commentary) follow after Paanini and subject his grammatical work to their scrutiny. There has been much controversy as to how Kaatyaayana and Patanjali have assessed Paanini's work.⁵⁴

The grammarians who follow the above trio, did not contribute to the grammatical system by way of facts or methodology.⁵⁵ The only exceptions appear to be Bhartrhari and Vaamana Jayaaditya. The work of the former⁵⁶ is more concerned with the metaphysical aspects of grammatical analysis and that of the latter⁵⁷, the earliest commentary on Paanini's work, furnishes examples for each of Paanini's rules.⁵⁸

The later grammarians are better to be regarded as commentators. Raamcandra,⁵⁹ the writer of the commentary

54. Goldstücker, T., (1861), pp. 119-121: 'Kātyāyana ... does not leave the impression of an admirer or friend of Pāṇini, but that of an antagonist, often too, of an unfair antagonist' ... Patanjali often refutes the strictures of Kātyāyana and takes the part of Pāṇini'.
cf. Kielhorn, F., (1876), p. 52: Kātyāyana is 'a follower and judicious admirer of Pāṇini' ... 'Patanjali has defended Pāṇini from some of the objections brought against him by Kātyāyana', but 'in many cases his criticism is much more thorough-going and destructive than Kātyāyana's and Pāṇini has suffered more at his hands than at those of the Varttikakāra' (i. e., Kātyāyana).
55. Burrow, T., (1955), p. 50: they 'present the material contained in Pāṇini ... they contain little that is original'.
56. Bhartrhari (500 A.D.), (ed.) Abhyankar, K.V. & V.P. Lemaire, (1965), p. XIII
cf. Robins (1967), p. 139
57. Vaamana Jayaaditya, (650 A.D.), (ed.) Shastri, S.D.D. & Pt. K.P. Shukla (1965).
58. It may be noted that Paanini himself did not give examples for his rules. cf. Misra, V.N., (1966), p. 12.
59. His period is 1500 A.D., (Macdonell, 1911, p. xi).

'Prakriyaakaumudii', explains and rearranges Paanini's rules.

His method is closely followed and improved upon by Bhattajidiikṣita,⁶⁰ the writer of the 'Siddhaantakaumudii.' The latter work has virtually ousted, for pedagogical purposes, Paanini's work from the curriculum.⁶¹

I. 2. 3. Among the western scholars⁶² who have taken up and encouraged the study of the Sanskrit language and its grammar, the first is Sir William Jones,⁶³ though Macdonell refers to two missionaries (1668, 1732) who were acquainted with the language.⁶⁴

The earliest Sanskrit grammars published in English include that of W. Carey (1806, Serampore) and of C. Wilkins (1808, London). The three most notable figures among Europeans are (i) F. Bopp who was the first to attempt a comparative philological study of Sanskrit,⁶⁵ (ii) T. Benfey who investigated the language of both vedic and epic texts⁶⁶, and (iii) W. D. Whitney who was the first to write a historical grammar of Sanskrit by treating the vedic language 'more fully and explaining from it the development of classical sanskrit.'⁶⁶

60. His period is 1700 A.D., (Macdonell, 1911, p.xii).

61. Belvalkar, S.K., (1915), p.46; also, Saxena, B.R., (1951), p.14.

62. For details see Pedersen, H., (1931) and Lehmann, W.P., (1967).

63. Jones, Sir William, (1786): 'the Third Anniversary Discourse on the Hindus' in Lehmann, W.P., (1967), pp.10-20.

64. Macdonell, A.A., (1911), p.xiii.

65. Macdonell, A.A., (1911), p.xiv.
Robins, R.H., (1967), p.148.

66. Pedersen, H., (1931), pp.19-22; Macdonell, A.A., (1911), p.xiv;
Lehmann, W.P., (1967), pp.38-45.

I. 2. 4. The Indian grammarians and commentators in their analysis of cases more or less followed Paanini's rules which considered cases (kaarakas) to be grammatical relations of underlying structures and did not identify these with case-inflexions.

However, the western scholars of the nineteenth century missed this point in their analysis of the Sanskrit language. The reason was that they followed the traditional approach in which case-inflexion was considered the fundamental criterion of distinction between noun and predicate (or verb) and the category of case became restricted to nominals (nouns, participles, articles). They described the different case-forms in relation to their uses.⁶⁷ The first to be different in his approach from the above, appears to be the English grammarian James Harris (18th century).⁶⁸

Thus, Wilson in his Sanskrit grammar, refers to eight cases: nominative, accusative, instrumental, dative, ablative, genitive, locative and vocative.⁶⁹ Monier-Williams thinks that 'Sanskrit syntax, unlike that of Greek and Latin, offers fewer difficulties.'⁷⁰ Perry devotes eight pages to nominal declension only and mentions nothing about cases.⁷¹ Edgren refers to cases and also to the 'function of cases'

67. Robins, R.H., (1967), pp. 26-29, 33-35, 50-52, 59.

68. Robins, R.H., (1967), p. 154: Harris advocates 'identification of those universal categories of grammar and relations' because 'the same function ... was served by case-inflexions in Latin and by prepositions in English'.

69. Wilson, H.H., (1847), pp. 377-402.

70. Monier-Williams, M., (1877), pp. 354-361.

71. Perry, E. D., (1885), pp. 83-91.

in a footnote.⁷² According to Macdonell 'the absence in Sanskrit of the indirect construction ... is in itself a tolerably clear proof that the structure of complex sentences in Sanskrit must be far less involved than in Latin or Greek.' He refers to eight cases and adds that 'the syntactic arrangement of the sanskrit sentence is primitive and undeveloped, as compared with Greek and Latin.'⁷³ Thus, all these scholars appear to identify case-inflexion with cases, and, at best, they refer to uses or functions of the cases for which the most comprehensive analysis with extensive citations from the texts, appears to be that of Speijer.⁷⁴

The Indian grammarians of the 19th and 20th centuries follow, more or less, either the principles of western traditional grammatical analysis or the system of the traditional Indian commentators.⁷⁵

However, the period from the thirties of the present century, has witnessed a revival of interest in the work of Paanini, in the wake of advances both in theory and methodology of linguistic studies and consequently, scholars have better appreciation of the case-system in

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72. Edgren, H., (1885), p. 37 (f. n. 90): he refers to eight cases and in his treatment lays emphasis on morphology.
73. Macdonell, A. A., (1911), pp. 178-209.
74. Speijer, J. S., (1886), pp. 24-113.
75. Taraporewala, I. J. S., (1967), this contains his Wilson Philological lectures delivered at the Bombay University in 1937. Apte, V. S., (1921); Kale, M. R., (1918⁵).

Sanskrit (an indication of which is given by Faddegon⁷⁶) as explicated through the rules of Paanini.

Recently, linguists like Staal and Kiparsky in their works, have re-analysed some aspects of Sanskrit syntax on the basis of the rules of Paanini.

Staal has discussed word-order in Sanskrit which he accepts, on the basis of the works of ancient Indian grammarians, to be free,⁷⁷ and advocates a word-order-free categorical component as a linguistic universal. The word-order in Sanskrit which Staal cites as a support for having base-rules free from sequential ordering, has also been studied by scholars like Delbrück and Gonda who have analysed selected Sanskrit texts. Their studies, however, have ended as statistical assessments which reveal little significant about the word-order in Sanskrit.⁷⁸

Indian scholars like Lahiri have also undertaken such analyses; but their conclusions remain vague and, at best, maintain

76. Faddegon, B., (1936), p.18: referring to Paanini's 'kaaraka'-theory, he says: 'evidently Pānini tries in this analysis to separate the ideational aspect from the linguistic expression, an attempt which the Occidental linguists of the latter half of the nineteenth century have condemned [he refers to the criticism of Whitney^{BSK7}, misled as they were by the hope of being able to understand language through the exclusive study of its phonal and morphological aspect, i.e., its articulative utterance and the association-system underlying declension and conjugation, as if the application and imitation of physics and a mechanistic psychology were the last word of moral science'.

77. Staal, J.F., (1967), pp.16-50.

78. As discussed in Staal (1967), p.59.

that the logical natural sequence of ideas is expressed in word-order.⁷⁹

The possibilities of sequential ordering that such studies suggest, amount to 'saying xyz and xzy occur, but on the other hand yxz, yzx and zyx also occur'.⁸⁰

Due to this characteristic of free-word-order in Sanskrit, FCG commends itself as a framework for the analysis of Sanskrit syntactic structures. Because, as pointed out earlier (I.1.2.3), FCG does not assume a sequential ordering in the base-component. As against FCG, Staal's proposal for a set-system in the categorial component for making it universal⁸¹ (as opposed to Chomsky's concatenation-system) does not appear to be acceptable for Sanskrit. As Staal retains the constituency-analysis (i.e. $S \rightarrow NP \widehat{VP}$), it is not clear how this VP is to be specified in Sanskrit unless some sort of word-order is implied. Since, for the analysis of a language like Sanskrit, the choice remains between EST (of Chomsky) and FCG, the one proposed by Staal does not appear to be acceptable.⁸² Secondly, Staal appears

79. Lahiri, P. C., (1933), p. 372: '... it is generally said that an inflexional language like Sanskrit is almost absolutely free in its word-order, we have found that usually the word-order follows the thoughts as they occur to the mind of the speaker or writer. Their order is occasionally disturbed for special reasons mainly to lay emphasis on a particular word'.

80. Dover, K. J., (1960), p. 1.

81. Staal, J. F., (1967), pp. 60-90.

82. cf. Seuren, P. A. M., (1969), pp. 173-174: he does not raise this point, but questions Staal's position on some other ground: 'it has not appeared so far ... that an unordered nucleus expansion of the type proposed by Staal is useful or necessary for English, as opposed to languages with free word-order.'

to identify case with inflexion as he postulates a rule such as
 $NP \rightarrow \{ N, Num, Cas, (S) \}$ ⁸³, despite his acceptance that case
 (kaaraka) - relation in Sanskrit is a deep grammatical relation. Thirdly,
 his treatment of Sanskrit syntax is confined to word-order only and does
 not go beyond the analysis of ten sentences. In view of these, Staal's
 framework and treatment of Sanskrit syntax appear to be highly in-
 adequate.

Kiparsky, along with Staal, has investigated the syntactic -
 semantic relations of Sanskrit as accounted for by Paanini's rules.⁸⁴
 But, this treatment also appears to be inadequate for more than one
 reason. In the first instance, their treatment is not concerned with
 Sanskrit syntax in general, rather it shows to what extent Paanini's
 rules capture the generalisations of Sanskrit syntactic structures.
 Secondly, though it mentions genitive, it does not discuss genitive
 constructions. Thirdly, certain constructions which are discussed
 in chapters II, IV of this study are not discussed by them. Thus, their
 analysis of Sanskrit syntax, covers a highly restricted ground.

I.2.5. The present study may, thus, be considered as the first
 attempt at an analysis of Sanskrit syntax within a transformational-
 generative theoretical model. The study is carried on within the
 framework of FCG in view of FCG's characteristics as specified in
 I.1.3.2. and I.1.3.3.

83. Staal, J.F., (1967), p.65.

84. Kiparsky, P. and J.F. Staal, (1969).

No attempt is made, in this study, to present a comparative study of Paanini's 'kaaraka'-theory and FCG;⁸⁵ in fact, the cases of FCG and the kaarakas need not be identified with each other and as such this problem is considered beyond the scope of this study.

1.2.5.1. The following limitations have been imposed on this study.

(i) The first relates to case-specification. There are sentences like 1-8 which have not been considered in this study.

1. saa - sundaram - nr̥tyati
 she - beautiful - dances

 (she dances beautifully)
2. saa - madhuraṁ - bhaasate
 she - sweet - speaks

 (she speaks sweet)
3. idam pustakam - Amerikaaviṣaye - asti
 this book - America about - is

 (this book is about America)
4. baalakaanaam - madhye - ekah - baalakah - vadati
 of boys - midst - one - boy - speaks

 (one of the boys speaks)
5. raamah - chaatreṣu/chaatraanaam - śreṣṭhah - asti
 r. - among students/of students - best - is

 (r. is the best among the students)
6. mohanah - sohanaat - gauratarah - asti
 m. - from s. - fairer - is

 (m. is fairer than s.)
7. tasyaah - vadanam - candrah - iya - asti
 her - face - moon-like - is

 (her face is like the moon)

8. sa - paśuḥ - asti
 he - animal - is
 (he is an animal)

Sentences 1 and 2 above contain adverbials, and as the analysis of adverbials in general is not included in this study, sentences like these have not been analysed.

Sentences like 3-8 above, suggest the need for postulating cases in addition to the ones considered in this study. There has been a suggestion⁸⁶ for postulating a case like 'referential' for the NP 'amerikaa-visaye' (in 3). Sentence 3 may be considered along with sentences 9, 10 below in which cases R, O have been specified. Although some classes of NP - asti - NP sentences are considered (chap. III) and although constructions like 9, 10 are dealt with (II.1.2 and II.2), it is not clear what should be the status of the NP (underlined in sentence 3) with regard to case-specification.

9. sa - putram - cintayati
 R
 he - son - worries
 (he worries about his son)
10. sa - pariikṣaam - cintayati
 O
 he - examination - worries
 (he worries about his examination)

Sentences 4-8 imply comparison of varying types and degrees.

Sentences which involve comparison are not considered in this study.

Sentence 8, in addition, shows a metaphorical use of the NP 'paśuḥ'.

86. Stockwell, R. P., et.al. (1968), p. 957.

Since sentences with metaphorical and suggestive interpretations are beyond the scope of this study, they are excluded from this study.

(ii) Secondly, in addition to the above types of sentences, those containing negation have been left out.

(iii) Thirdly, the intonational pattern of the sentences has been ignored. The study of intonational pattern of Sanskrit sentences requires separate treatment. Moreover, the intonation of the speakers of Sanskrit may largely be influenced by the intonation-pattern of the modern Indian languages which are in most cases their mother-tongues. Besides, the study of intonation in Sanskrit has been confined to the vedic texts and is purely academic and thus it has no relevance for the classical Sanskrit.

(iv) Lastly, only simple sentences, as a general rule, are analysed in this study. A departure from this is made in the case of genitive constructions and NP-asti-NP sentences wherein the process of nominalisation is involved. However, this departure is undertaken more with a view to illustrating the points under consideration in simple sentences than to explicating the characteristics of complex sentences.

1.2.5.2. The data that are discussed in this study, are not based on some particular texts, but on the knowledge of the classical texts of grammar and literature which I have acquired during the past years as a student of Sanskrit. It is an attempt to analyse the principles or rules which underlie Sanskrit syntactic structures and which are internalised by a speaker-hearer of the language. Thus, this study is a 'formal account of competence' and makes 'no direct commitment

vis-à-vis performance.⁸⁷ It is hoped that this study in the sense of 'formal account of competence' would, given any particular sentence, spell out precisely the processes involved in its generation.

Though it cannot be claimed that this study exhausts the analysis of all possible simple syntactic structures in Sanskrit, it may reasonably be maintained that it does not exclude any structure which may materially affect the theoretical assumptions.

Lastly, this study is concerned with Sanskrit syntax and not with the phonology⁸⁸ of Sanskrit. Besides, Sanskrit as spoken today in India, is influenced by the phonetic/phonological pattern of the speakers of different modern Indian languages. So, there does not appear any need for giving phonetic details. A systematic transcription may suffice for this study.

87. King, R.D., (1969), p.12.

88. Zwicky, A., (1965): for a treatment of the phonology within the framework of generative grammar.

CHAPTER II

II. In this chapter the case-categories A(genitive), D(ative), R(eceptive), O(bjective), F(active), I(nstrumental), L(ocative), SO(urce), GO(al), Ext(ent), Pa(th) are discussed. Of these, R¹ is not mentioned by Fillmore.

It is proposed to discuss the case-categories A, D, R in section II.1; O, F and Cognate Objects² in II.2; I in II.3; L, SO, GO, Ext, Pa in II.4.

II.1 In this section the case-categories A, D, R are discussed and distinguished from each other. Recently, the case-category D has been replaced with Experiencer³, but this substitution has not been followed by any discussion. So the case-category D, rather than Experiencer, is retained for the reasons given in II.1.3. below.

II.1.1. If the arguments⁴ of a verb are case-categories A and D⁵,

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1. Wilson, W.A.A., (1971), p.75: it appears that the case-category R is mentioned, for the first time, in this thesis.
 2. Fillmore, C.J., (1968a), pp.85-86.
 3. Fillmore, C.J., (1969), p.116.
 4. Fillmore, C.J., (1968b), p.373: 'the objects concerning which a predicate asserts something are the arguments of that predicate.' The number of arguments is the number of nouns a verb requires in a syntactically complete expression. Cf. Fillmore, C.J., (1969), pp.114-115.
 5. Case-categories A, D, R are examined with reference to their definitions given by Fillmore in II.1.2 and II.1.3.

these must be realised by NP's having the feature $\bar{[animate]}$ as in sentences 1, 2. If the NP acting as the argument of a verb (even the same verb) is not animate, the case-category cannot be A/D as in sentence 3.

1. baalakah - patati⁶
A boy falls
2. baalakah - mryate
D boy dies
3. patram - patati
O leaf falls

The case-categories A, D are distinguished from R as follows. Whereas the case-categories A and D may occur as the sole arguments of a verb, R (II.1.2) presupposes the presence of A/D in addition (to itself). Thus sentences 4 and 5 are acceptable but not 4' and 5'.

4. dustah - dandena - baalakam - taadayati
A I R
wicked - with stick - boy - beats

(a wicked man beats the boy with a stick)

5. guruh - s'isyam - cintayati
D R
teacher - pupil - worries

(a teacher worries about his pupil)

- 4' * dandah - baalakam - taadayati
I R
stick - boy - beats

-
6. The question of intentional or non-intentional involvement of one or more of the participants in the events described by the verbs, is taken up in II.1.4 and II.3.5.3.

5' * dharmah - s'isyam - cintayati
 O R
 religion student - worries

When the case-category A or D occurs in the case-frame of a verb in a simplex sentence,⁷ it is subject normally⁸ to a Subjectivisation-rule and enters into concordial agreement with the V. The subjectivisation-rule which selects A/D for agreement with the V applies optionally. If case-categories R/O/F/GO also occurs in a case-frame in addition to A/D, and A/D is not selected for subjectivisation, R/O/F/GO⁹ is selected for subjectivisation. This fact is registered (i) in the form of adding the stem-element -ya - to the item under V; (ii) in taking on the features (of [number] and [person]) of R/O/F/GO by M; (iii) and by a difference in the inflection selected by M, i. e. an affix of the 'TE'-class, rather than that of 'TI'-class. This subjectivisation of R/O/F/GO in case A/D is not subjectivised, will be referred to, henceforth, as the process of passivisation. If the case-category R/O/F/GO does not occur in a case-frame and the subjectivisation-rule does not select A/D for subjectivisation, no other case-category is selected for agreement with the V, as a general rule,¹⁰ and this fact is registered in the operation of the

-
7. Sentences with the case-category PR(ompter) in causative constructions are considered complex and are not treated in this analysis.
 8. Sentences with O/I/L selected by the subjectivisation-rule agreeing with the V, do not allow A/D in their case-frames (II. 2. 1. 2, II. 4. 3. 3).
 9. The subjectivisation of GO is highly restricted (II. 4. 5).
 10. Exceptions are mentioned in the sections dealing with the case-categories concerned.

process of passivisation with the difference that the M invariably takes on the features [+third], [+singular]. This latter process will be referred to as passivisation without subjectivalisation. Thus a sentence like 6 corresponds to sentence 7, if A is not selected for concordial agreement with the V, wherein the process of passivisation operates; and sentence 1 corresponds to sentence 8 in case the subjectivalisation-rule does not select A and consequently the process of passivisation without subjectivalisation operates.

6. baalakah - grantham - pathati
 A nom O acc
 boy book reads

(the boy reads a book)

7. baalakena - granthah - pathyate
 A i O nom
 by boy book is read

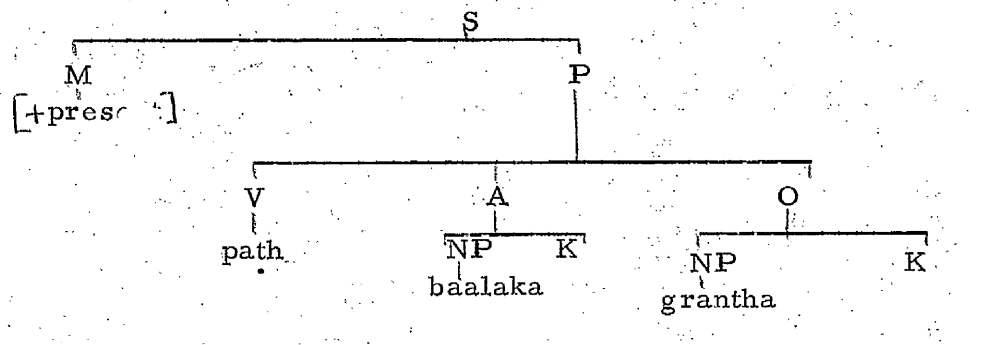
(the book is read by the boy)

8. baalakena - patyate
 A i
 by boy is fallen

((it) is fallen by the boy)

Sentences 6, 7 have the underlying structure (in relation to which P.S. rules¹¹ have already operated) as in figure I.

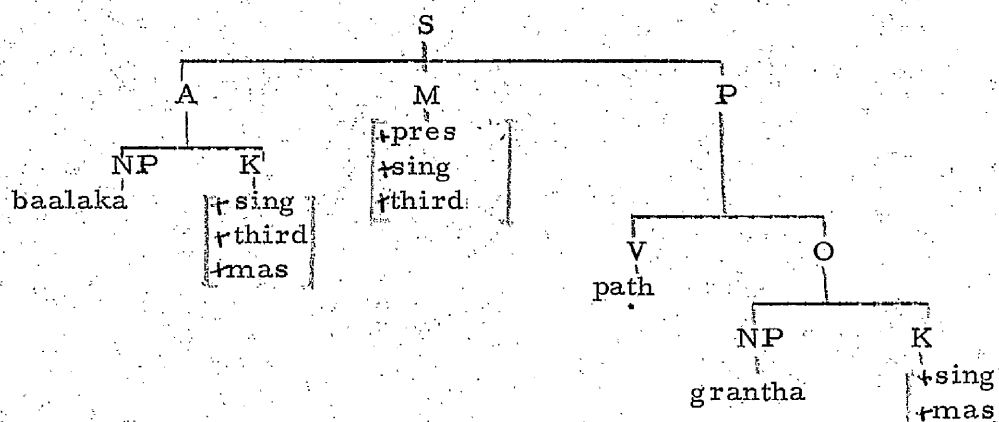
Figure I



11. For P.S. rules see VI. 1. 3. 1.

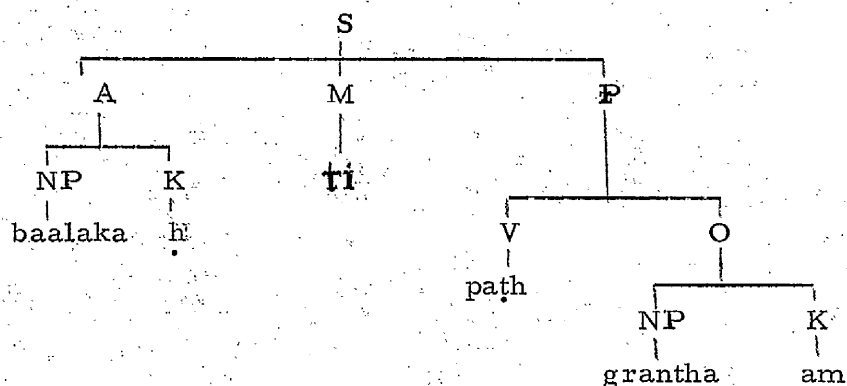
12. A Subjectivalisation-rule applies and selects A for agreement with the V. The result is as represented in Figure II.

Figure II



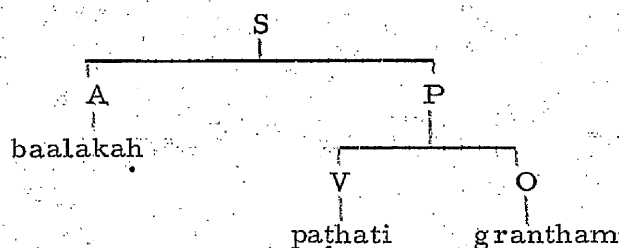
An Affix-substitution rule applies and replaces features with affixes, with the result as in Figure III.

Figure III



The final form (aside from scrambling),¹³ is as given in Figure IV.

Figure IV

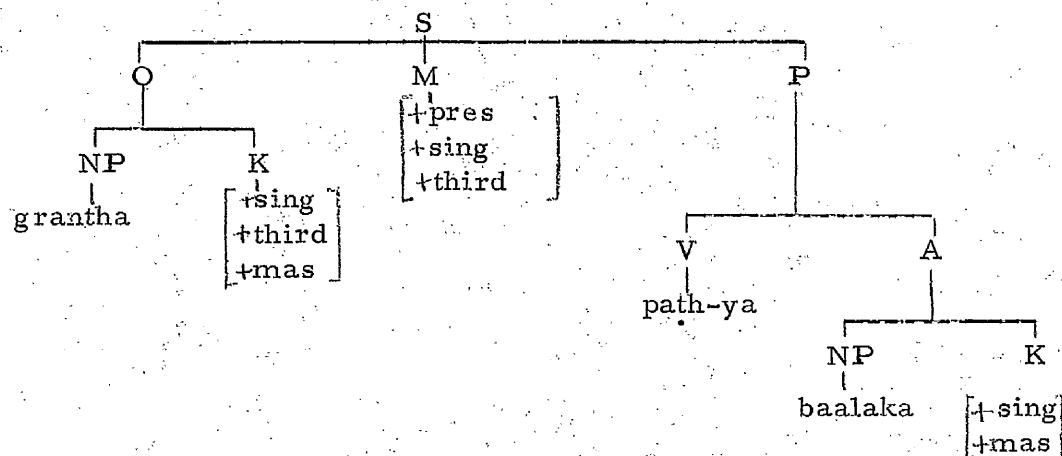


12. For T rules see VI.1.3.2.

13. Ross, J.R., (1970), pp.251-252: a scrambling rule 'optionally permutes major elements of a clause, subject to various conditions'. In this study, this problem is ignored and, henceforth, no reference to it will be made. Also Ross, R.J. (1967), pp.71-80 Lakoff, R. T., (1968), pp. 95, 103 (f.n. 9)

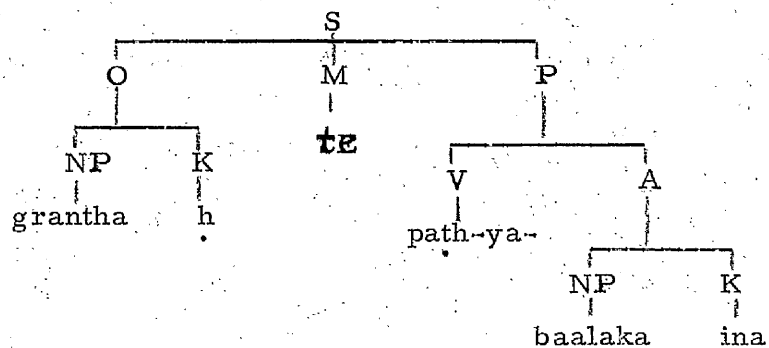
Alternatively, at the stage of Figure I, the Subjectivalisation-rule does not select A and consequently O is selected and the process of passivisation operates. The result is as in Figure V (from Figure I).

Figure V



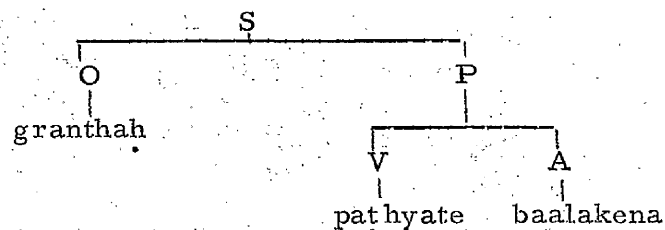
The Affix-substitution rule applies and replaces features with affixes and the result is as in Figure VI.

Figure VI



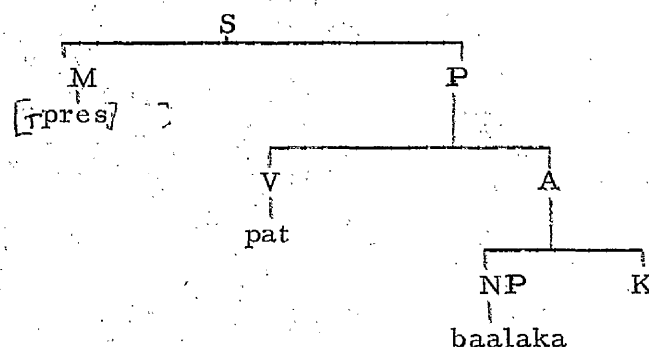
The final form is as in Figure VII

Figure VII



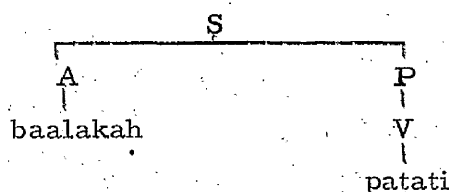
Sentences 1 and 8 have the underlying structure as in Figure VIII.

Figure VIII



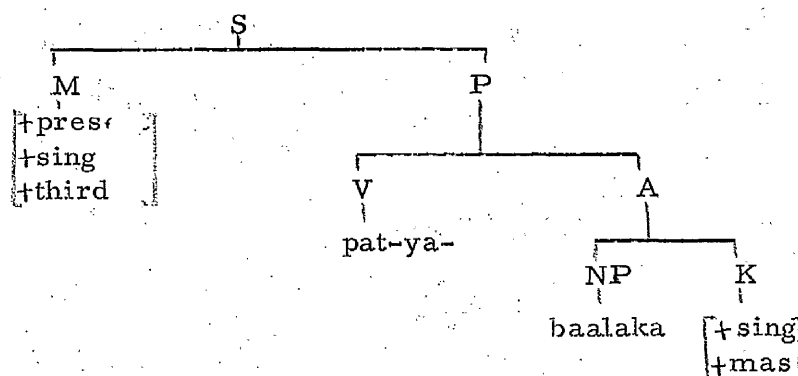
The Subjectivalisation-rule selects A for agreement with the V (as in figure II) and the Affix-substitution rule replaces features with affixes (as in Figure III) and the final form is as represented in Figure IX (omitting intervening details).

Figure IX



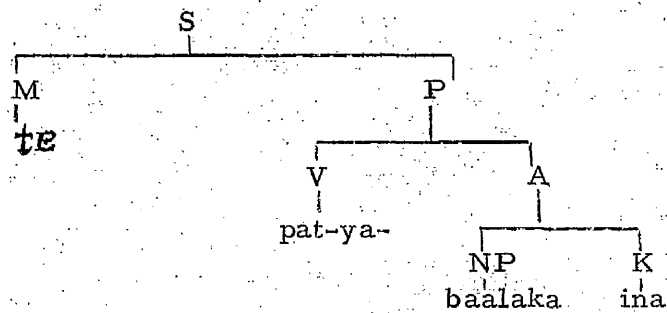
Alternatively, at the stage of Figure VIII, the Subjectivalisation-rule does not apply and the process of passivisation without subjectivalisation operates. The result is as in Figure X (from Figure VIII).

Figure X



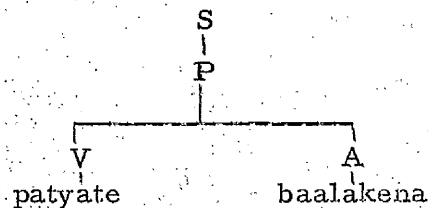
The Affix-substitution rule applies and the result is as in Figure XI

Figure XI



The final form is as represented in Figure XII.

Figure XII



It may be noted that the process of passivisation without subjectivalisation differs from the process of passivisation in that the M always selects (in the former case) the unmarked features [sing], [third] as is evident from sentences 9'-12'.

9. baalakaah - hasanti
 A nom
 boys laugh
- 9'. baalakaih - hasyate
 A i
 by boys - is laughed

((it) is laughed by boys)

10. baalakah - hasati
 A nom
 boy - laughs
- 10'. baalakena - hasyate
 A i
 by boy - is laughed

((it) is laughed by a boy)

11. baalakaah - s'ayane - svapanti
 A nom L 1
 boys - in bed - sleep

(boys sleep in bed)

11'. baalakaih - s'ayane - supyate
 A i L 1
 by boys in bed - is slept

((it) is slept in bed by the boys)

12. baalakah - s'ayane - sva piti
 A nom L 1
 boy - in bed - sleeps

(a boy sleeps in bed)

12'. baalakena - s'ayane - supyate
 A i L 1
 by boy - in bed - is slept

((it) is slept in bed by the boy)

The case-category A is distinguished from D, as it occurs in a case-frame which is assigned to non-stative verbs. Non-stative verbs are those that may occur in reply to the query 'kim-karoti' (what does (x-do))?¹⁴ Thus the verb-forms in sentence 13 are non-stative and have an A in their case-frame and those in sentence 14 are stative and have a D in their case-frames.

sa-kim-karoti : 13. sa - pathati (reads)
 he - what - does he - { khelati (plays)
 (what is he doing) { gaayati (sings)
 { hasati (laughs)

sa - kim - karoti : 14. sa - jiiivati (is alive)
 { vidyate (exists)
 { asti (is)

14. Thus, the case-categories A, D are distinguished from each other on syntactic criterion as well.

bhavati (becomes)	}
cintayati (worries)	
aaste (stays)	

It may be noted that sentences (14) are deviant only as replies to the relevant question.

II.1.2. In this section, R is distinguished from A and D. All these three case-categories are assigned to arguments of a verb which are realised by NP's with the feature [+animate]. It was mentioned above (II.1.1) that R presupposes the occurrence of A/D (cf. sentences 4, 5) in its case-frame. This case-category is distinct from A/D, because, though the entity specified as R undergoes or accepts the effect of an activity or state identified by the verb, it does not initiate it. Fillmore has not postulated a case-category like R (f.n.1). It may be that whatever is specified here as R, is subsumed under his D¹⁵ which would make possible the elimination of a case-category like R. Let it be accepted that R is not needed and there is only D in addition to A. Now, consider sentences 2 and 4 above, wherein both 'baalakaah' (in 2) and 'baalakam' (in 4) are re-specified as D (rather D₁ and D₂ for convenience). The Subjectivalisation-rule applies to the underlying structures of sentences 2, 4 and selects the D 'baalaka' (in 2) and the A 'dusta' (in 4) for subjectivalisation. But, as mentioned earlier, Subjectivalisation-rule operates optionally and in case it does not apply, the D₁ 'baalaka' (in 2) does not enter into agreement with

15. For discussion see II.1.3.

the V. Now, the problem is how to account for this difference in syntactic behaviour of D_1 and D_2 (in 2, 4)? One may argue that D co-occurring with A (as in 4) must be subjectivalised in case A is not subjectivalised. But this does not solve the problem. Consider sentence 5. Even Fillmore's definitions (II.1.3) would specify 'guruh' (in 5) as D. Now what case-category is to be assigned to 's'iṣyam' (pupil)? It will be correct to assume that Fillmore would or will have to specify 's'iṣyam' as D (unless he invents another case-category). Apart from the fact that this occurrence of two Ds (in 5) in a simplex sentence goes against his principle of 'one-instance-per-clause',¹⁶ it creates another problem. How to account for the fact that the subjectivalisation-rule selects 'guruh' (D_1) for agreement with the V, and in case D_1 is not subjectivalised, 's'iṣyam' (D_2) necessarily enters into agreement with the V with the consequential operation of the process of passivisation. To get round this problem one may suggest that Fillmore would respecify D_2 ('s'iṣyam') as O. But, this does not solve the problem. In II.2.11 it is argued that there is need to distinguish R from O. Besides, this suggestion, if followed in a sentence like 15, would make the specification of case-categories problematic. What case-category is to be assigned to 's'iṣyam' in 15 O or D? Following the assignation of O to 's'iṣyam' in sentence 5, one would be inclined to specify 's'iṣyam' in 15 as O. The result is, again, the occurrence of two O's in one simplex sentence and the consequential problem of selecting one of the O's in case the process of passivisation operates.

16. Fillmore, C.J., (1971), p.248

15. guruh - s'isyam - dharmam - bruute
 A O O
 teacher - student - religion - speaks

(teacher speaks to the pupil about religion)

It is difficult to anticipate the solution that may be suggested by Fillmore. But, there appears to be sufficient justification for the case-category R as postulated in this section.

II.1.3. The three case-categories A, D., R have been distinguished above. Now, in ^{the}light of the above discussion (II.1.1., II.1.2), the definitions¹⁷ given by Fillmore with reference to A, D, E(xperiencer) are examined below.

The case-category A has been defined more or less consistently and, in this analysis, the definition given in 'the Case for Case' (1968a)¹⁸ is accepted. As specified above, sentences 1, 4, 6-15 contain the case-category A.

In so far as the case-category D¹⁹ is concerned, there have

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17. Fillmore, C.J., (1968a), p.24; (1969), p.116; (1971), pp. 251, 253.
18. Fillmore, C.J., (1968a), p.24: 'Agentive, the case of the typically animate perceived instigator of the action identified by the verb'.
 cf. Fillmore, C.J., (1969), p.116: 'Agent, the instigator of the event', cf. Fillmore, C.J., (1971), p.253: 'the principal cause' interpretation of the Agent case seems, for many sentences, to be quite adequate'.
 The problem of NP's indicating natural phenomena is discussed in II.3.3.1.
19. Fillmore, C.J., (1968a), p.24: 'Dative, the case of the animate being affected by the state or action identified by the verb.'

been proposals to replace it with Experiencer.²⁰ It is proposed to discuss Experiencer first (as defined by Fillmore f. n. 21) and then take up Dative (f. n. 20).

II.1.3.1. The case-category Experiencer is not defined explicitly enough to indicate which of the two NP's (in case there are two NP's in the case-frame) in relation to a psychological event or mental state verb, is to be specified as Experiencer. Consider a sentence like 5 above. The NP's 'guruh' (teacher) and 's'işyam' (pupil) are both related to the verb 'cintayati'. However, it may be interpreted (in favour of the definition) that the NP which indicates initiation of the psychological event or mental state verb, is to be specified as Experiencer. Thus 'guruh' and not 's'işyam', is Experiencer. So far, there appears to be no difference between the old Dative (f. n. 20) or Dative as analysed above (II.1.1) and Experiencer except the terminological one. Now consider sentences like 16, 17 wherein the case-categories following Fillmore (f. n. 21), have been specified as O, E.

16. sa - mriyate
O he - dies

17. sa - glaayati / cintayati
E he - feels weary / worries

20. Fillmore, C.J., (1969), p.116: 'Experiencer, the entity which receives or accepts or experiences or undergoes the effects of an action (earlier called by me 'Dative')'. cf. Fillmore, C.J., (1971), p.251: 'I have reanalysed the old Dative by spreading it around among the other cases. Where there is a genuine psychological event or mental state verb, we have the Experiencer, where there is a non-psychological verb which indicates a change of state, such as one of dying or growing, we have the Object. Where there is a transfer or movement of something to a person, the receiver as destination is taken as the Goal.'

Whatever process, psychological or non-psychological, may be involved in feeling weary or worrying or dying, the way the NP 'sa' (he) is affected in 16 is not different from that in 17. In other words, if no external agency affects 'sa' in 17, so is the case in 16. Thus, there is no reason why the 'sa' in both 16 and 17 should not be specified either as E or O. In so far as syntactic justification is concerned, there appears to be none. The Subjectivalisation-rule applies to both (16, 17) optionally and in case O/E is not selected for agreement with the V, the process of Passivisation without subjectivalisation operates in the case of both 16, 17 as is evident from 16', 17'.

16' tena - mryate
O i
by him - is died
((it) is died by him)

17' tena - glaayate / cintyate
E i
by him - is felt weary/ is worried
((it) is felt weary / worried by him)

Again, take a sentence like 18, wherein Fillmore's definition of E, O (f.n. 21 (1971)) would lead to the postulation of two Os despite the explicit constraint against such a possibility.

18. ambaa - putram - pas'yati
O nom O acc
mother son sees

(the mother looks at her son)

It is not clear how the Subjectivalisation-rule is to be specified in relation to its operation in sentence 18. In sentence 15, the problem relates to the process of passivisation and in 18, it relates to the process of subjectivalisation as well: namely how one of the two Os is to be selected for subjectivalisation, and in case the Subjectivalisation-rule does not apply, how one of the Os will be selected for passivisation.

The problem created by bringing in O as a partial substitute of D (f.n. 21 (1971)) is evident from sentences like 19.

19. sa - naagarikam - maargam - prcchati

A ? O
he - city-dweller - way - asks

(he asks the city-dweller about the way)

It is not clear whether E or O should be assigned to the unspecified NP in 19. If it is specified as E, it goes against the definition of Fillmore (f.n. 21 (1971)) and if it is O then, again, the problem in regard to passivisation (i.e. due to occurrence of two Os) crops up.

In order to strengthen his position that O like E is, at least partially, a replacement of D and thus there is some sort of link between O and E (f.n. 21 (1971)), Fillmore suggests that embedding dominated by O may be related to a psychological event (f.n. 21 (1971)) as in sentence 20. But, the embedding under O may relate to non-psychological events as well; as in sentences 21, 22.

20. ambaa - cintayati [[yat - putrah - kiidra'sah - asti]]
O S S O

mother - worries - that - son - how - is

(the mother worries as to how her son is)

21. sainikah - amriyata [[yatah - des'ah - no - paraabhuyeta]]
O S S O

soldier - died so that - country - not - may be subjugated

(the soldier died so that his country might not be subjugated)

22. sainikah - s'atruun - hanti [[yatah - te - des'am - no
O S

soldier - enemies - kills so that - they - country - not

aakramisyanti]]
S O

will attack

(the soldier kills the enemy so that they will not attack his country)

Considering sentences like 16-22, it is proper to ignore E, O (as defined in f.n. 21 (1971)) as replacements for either the old D (f.n. 15) or old E (f.n. 21 (1969)).

Fillmore mentions that his old Dative (f.n. 20) includes what may be treated as Goal (f.n. 21). But, this does not appear to be convincing in view of his suggestion for a case-category like Benefactive,²¹ in addition to D. However, it is proposed here to identify Goal as a case-category distinct from A/D (II. 4. 5).

II. 1. 3. 2. Now, that Experiencer as defined by Fillmore ((1971) f.n. 20) need not be accepted it would be relevant to examine Experiencer (f.n. 20) and Dative²² (f.n. 19) in relation to D and R as specified in II. 1. 1. and II. 1. 2. above. There are three possibilities: D (1968a) and/or E (1969) as defined by Fillmore (f.n. 19, 20), includes (i) both D and R or (ii) only D or (iii) only R, as explicated by me in II. 1. 1. and II. 1. 2. Whichever possibility is accepted, it indicates that D and R as analysed above in II. 1. 1. and II. 1. 2. are established on different grounds. As specified in II. 1. 1. and II. 1. 2, D initiates a state identified by the verb (as opposed to A which is the initiator of an action identified by the verb) and R is the case affected by the state or action identified by the verb. As it has already been shown D and R need to be distinguished from each other and from A also, so there appears nothing to add on this point.

21. Fillmore, C.J., (1968a), p. 32.

22. There appears to be no difference between D (1968a) and E (1969) as defined by Fillmore.

II.1.4. Before this section (II.1) is concluded, one point needs to be considered. It has been suggested that there are sentences which indicate intentional or non-intentional involvement of an actant in the action identified by the verb. Now, the question is: should the NP specified as A, if there is non-intentional involvement, be rather considered a D?

Consider sentences 1, 24-26.

24. sevakah - kaacapaatraani - bhanakti
 A O
 servant - glass pots - breaks
 (the servant breaks the glass pots)
25. baalakah - aNgulim - churikayaa - chinatti
 A O I
 boy - finger - with knife - cuts
 (the boy cuts his finger with a knife)
26. sa - viṣam - bhuNkte
 A O
 he - poison - eats
 (he takes poison)

In all these sentences (1, 24-26), there may be an alternative interpretation which shows no intentional involvement of A. Now, one may argue that as the actant is non-intentionally involved in the action, the case-category should be specified as D rather than as A. It is possible to disambiguate such sentences by adding adverbials like 'saavadhaanam' (carefully) and 'nipunam' (cleverly / skilfully). In case either of these adverbials occurs in sentences 1, 24-26, the interpretation would be always intentional and the actant would be specified as A.

But, despite the above argument, there appears to be no need to make this distinction in case-specification. The use of adverbials

simply brings out the intentionality or non-intentionality of the actant and it does not make a non-stative verb a stative one, even conceptually. Consider sentences 25, 26 specially. Whether the action performed is intentional or non-intentional, there is no difference in the way it is performed. In fact, the vagueness in sentences 1, 24-26 may be attributed to our knowledge of the world i. e. we know that one would not normally perform an action like falling or cutting one's finger or swallowing poison.

Again, there are verbs like 'hasati' (laughs), 'likhati' (writes), 'yaati' (goes) which may involve intentional or non-intentional participation of an actant but no one would like to suggest that the case-category may be either A or D in the context of these verbs. Besides, stative verbs like 'pas'yati' (sees) and 'krs'yati' (becomes lean) may involve intentionality or non-intentionality of an actant, still the case-category is specified as D.

Thus, it appears reasonable not to take account of intentionality or non-intentionality of an actant for case-specification.

II.2 This section deals with the O(bjective), and F(active)/R(esult) cases and Cognate Objects. As these have been considered related in one way or other it is appropriate that they be discussed together, even though they appear at first sight to be different kinds of construct.

In subsection II.2.1 the case-category O is discussed. In subsection II.2.2, the F/R as a case-category distinct from O and the relevance of cognate objects in relation to F/R are examined.

II.2.1 The case-category O is discussed in subsections II.2.1.1, II.2.1.2, II.2.1.3. In II.2.1.1 definitions of O are taken up. In II.2.1.2 sentences containing O are shown through their derivations. In II.2.1.3.1 and II.2.1.3.2 the process of passivisation which involves R(eceptive) as well, is discussed. In II.2.1.4 sentences which allow obligatory deletion of A/D, are referred to.

II.2.1.1 According to Fillmore the case-category O is assigned to the entity that moves or changes or whose position or existence is in consideration.²³ Neither this nor an alternative definition²⁴ is followed up with exemplification or amplification. The only change (from a to b) worth noting, appears to be the elimination of the feature [animate].²⁵ This is implied in Fillmore's remark about experiencer

23. Fillmore, C.J., (1969), p.116.

24. Fillmore, C.J., (1971), p.251: "The Object case is that of the entity which moves or which undergoes changes, and I still use it as a waste-basket, sentences embedded to Objects can serve to identify, for example, the content of a psychological event as with the verbs of judging or imagining."

25. Fillmore, C.J. (1971), p.251: "I no longer confuse selection restrictions to animates with true case-like notions."

and Object case-categories wherein the two are considered to appear in complementary distribution, the Object being assigned in the context of a non-psychological verb indicating a change of state.²⁶ But, with this definition of O, sentences like 1, 2 would pose problem for Fillmore with regard to case-assignment as he would have to specify two occurrences of O, thus, breaking his 'one-instance [of one case-category] - per clause principle'.²⁷

1. sa - taam - pas'yati
 O O
 he - her - sees
 (he looks at her)
2. sa - taam - aadriyate
 O O
 he - her - respects
 (he respects her)

Secondly, there appears to be little syntactic justification (Fillmore has given none in 'Some Problems for Case-Grammar') for bringing O in line with A(gentive) and E(xperiencer) by eliminating the feature of [animacy]. As developed by Fillmore the case-categories A, E are assigned²⁸ to entities which are [+animate]. Now his definition of O (f.n. 26) indicates that it may be assigned to an entity which is [+animate]. Moreover, though O is assigned in relation to non-psychological verbs (f.n. 26), the sentence-embedding under O may be in relation to verbs of judging and imagining (f.n. 24). Thus the

26. Fillmore, C.J. (1971), p.251: "Where there is a non-psychological verb which indicates a change of state, such as one of dying or growing, we have the Object."

27. Fillmore, C.J., (1971), p.248.

28. Fillmore, C.J., (1971), pp.249-250; 253-255, 261.

demarcation between E and O becomes hazy to the extent that the definition or explication of the O, as in 'Some Problems for Case-Grammar', appears to be of no relevance to distinguish it as a case-category. So, the elaboration of O, as in 'Some Problems for Case-Grammar', is ignored²⁹ and, in the following discussions, it is proposed to refer to the case-category O³⁰ as " (i) the semantically most neutral case, the case of anything representable by a noun whose role in the action or state identified by the verb is identified by the semantic interpretation of the verb itself; (ii) conceivably the concept should be limited to things which are affected by the action or state identified by the verb."³¹ This definition contains two parts (marked by me) as (i) and (ii). The first part accounts for sentences like 3, 4, 5 and part two for sentences like 6.

3. saa - gaanam - gaayati
 A O
 she - song - sings
 (she sings a song)

4. pathikah - gamanam³² - karoti
 A O
 traveller - going - does
 (traveller goes)

5. (i) nadii - vahati (ii) vaayuh - vaati (iii) suuryah - diivyati
 O O O
 river - flows wind - blows sun - shines

29. For some problems arising out of this postulation of O, see subsections 2.2.2.3.

30. The postulation of O 'as a wastebasket' (Fillmore, C.J., (1971), p. 251) raises a problem for his case-theory, which is referred to in Chap. VII.

31. Fillmore, C.J. (1968a), p. 25: "the term [Objective_{bsk}] is not to be confused with the notion of direct object, nor with the name of the surface case synonymous with 'accusative'."

32. Constructions like 'gamanam-karoti' are discussed in II. 2.2.2. Towards the end of II. 2.2.2. it is proposed that such constructions may be covered by the process of nominalisation.

6. (i) saa - paridhaanam - rañjayati
 A O
 she - dress - dyes
 (she dyes the dress)

- (ii) ambaa - patram - pathati
 A O
 mother - letter - reads
 (mother reads a letter)

The case-category O is assigned to the entities which are $[-animate]$ and thus it is distinguished from the case-category R(eceptive),³³ assigned to the entities which are $[+animate]$ and are affected by the action or state identified by the verb. The case-category R appears distinguished from O on three points. In the first instance, R, as opposed to O (as in sentence 5 above), can never occur alone. Its occurrence in a case-frame presupposes A/D. Consequently, O may be selected for subjectivalisation, even in the absence of the process of passivisation, but R can be subjectivalised only when the process of passivisation has operated. Secondly, in a sentence like 7, there is need to distinguish R and O ('one-instance-per-clause principle' may be recalled).

7. yaatrikah - naagarikam - maargam - prcchati
 A nom R acc O acc
 tourist - city-dweller - way - asks
 (the tourist asks the city-dweller the way)

Thirdly, if R is distinguished from O which is assigned to inanimate entities, the embedding under O for processes like complementation appears semantically more appropriate.

33. This case-category is mentioned first (to my knowledge) by Wilson (1971).

II.2.1.2. In this sub-section, the case-category O is specified in relation to different syntactic structures. The case-frames in the sentences below, are [A, I, O -] in 8, 9; [I -] in 10, 10'; [A, I, R -] in 11, 12; [I -] in 13, 13'; [A, O -] in 14, 15, 17, 18; [O -] in 16, 16', 19, 19'. The derivations of 8, 9, 10, 14-16 are given in detail, those of 11, 12, 13, are limited to their underlying structures. The derivation of 17-19 being similar to that of 14-16 are not indicated.

8. s'atruh - agninaa - graamam - dahate
 A nom I i O acc
 enemy - with fire - village - burns
 (enemy burns the village with fire)
9. s'atrunaa - agninaa - graamah - dahyate
 A i I i O nom
 by enemy - with fire - village - is burnt
 (village is burnt with fire by the enemy)
10. agnih - dahati - (svayameva)³⁴
 I nom
 fire - burns - (itself)
- 10' agninaa - dahyate - (svayameva)
 I i
 by fire - is burnt - (itself)
 ((it) is burnt by fire (by itself))
11. aakhetakah - dhanusaa - pas'uun - vidhyati
 A nom I i R acc
 hunter - with bow - animals - shoots
 (the hunter shoots animals with a bow)
12. aakhetakena - dhanusaa - pasâvah - vidhyante
 A i I i R nom
 by hunter - with bow - animals - are shot
 (animals are shot with a bow by the hunter)

34. This sentence with a case-frame [I -] is given here to compare with sentences 16, 16', 19, 19' which have a case-frame like [O -].

13. dhanuuh - vidhyati - (svayameva)
 I nom
 bow - shoots - (itself)

13'. dhanusaa - vidhyate - (svayameva)
 I i
 by bow - is shot - (itself)
 ((it) is shot by the bow (by itself))

14. suudah - odanam - pacati
 A nom F acc
 cook - boiled rice - cooks
 (cook cooks boiled rice)

15. suudena - odanah - pacyate
 A i F nom
 by cook - boiled rice - is cooked
 (boiled rice is cooked by the cook)

16. odanah - pacyate - (svayameva)
 F nom
 boiled rice - cooks - (itself)

16'. odanena - pacyate - (svayameva)
 F i
 by boiled rice - is cooked - (itself)
 ((it) is cooked by boiled rice (by itself))

17. taksakah - kaastham - bhinatti
 A nom
 carpenter - wood - splits
 (carpenter splits the wood)

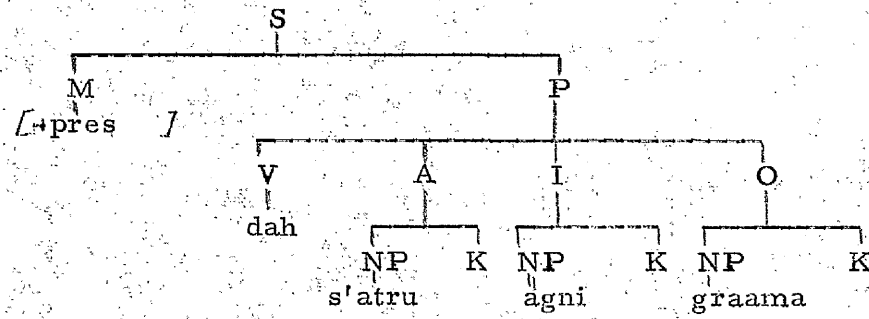
18. takṣakena - kaastham - bhidyate
 A i O nom
 by carpenter - wood - is split
 (wood is split by the carpenter)

19. kaastham - bhidyate - (svayameva)
 O nom
 wood - splits - (itself)

19'. kaasthena - bhidyate - (svayameva)
 O i
 by wood - is split - (itself)
 ((it) is split by the wood (by itself))

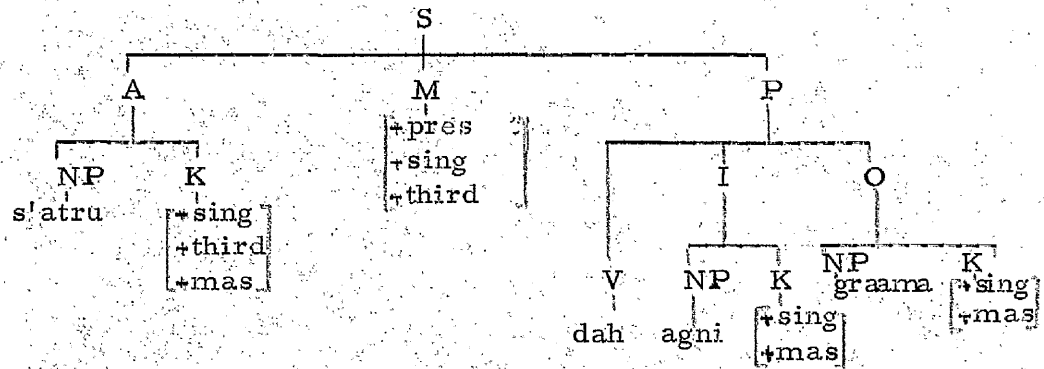
Sentences 8, 9 have an underlying structure as represented in Figure I.

Figure I



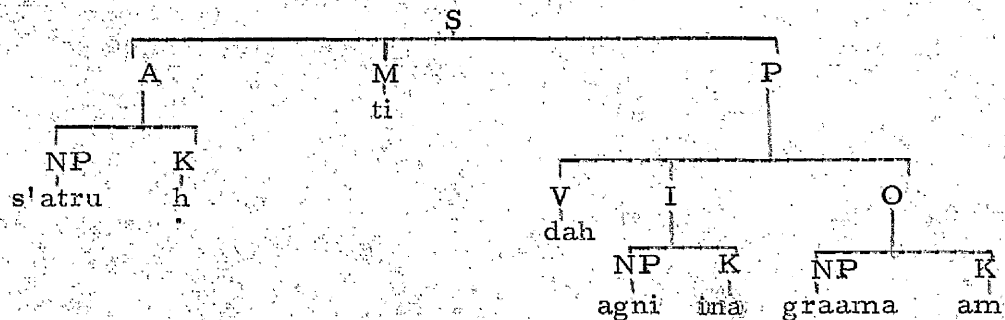
The Subjectivalisation-rule³⁵ applies and selects A. The result is as given in Figure II.

Figure II



The Affix-substitution rule replaces the features with affixes and the result is as represented in Figure III.

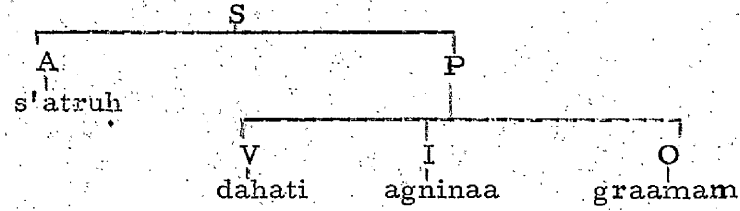
Figure III



35. It may be noted that the Subjectivalisation-rule in Sanskrit is optional. But, whenever the case-frame contains R and/or O/F in addition to A/D, and A/D is not selected for subjectivalisation, R or O or F, as a general rule, is selected for subjectivalisation. This process is referred to as passivisation with subjectivalisation (II.1.1).

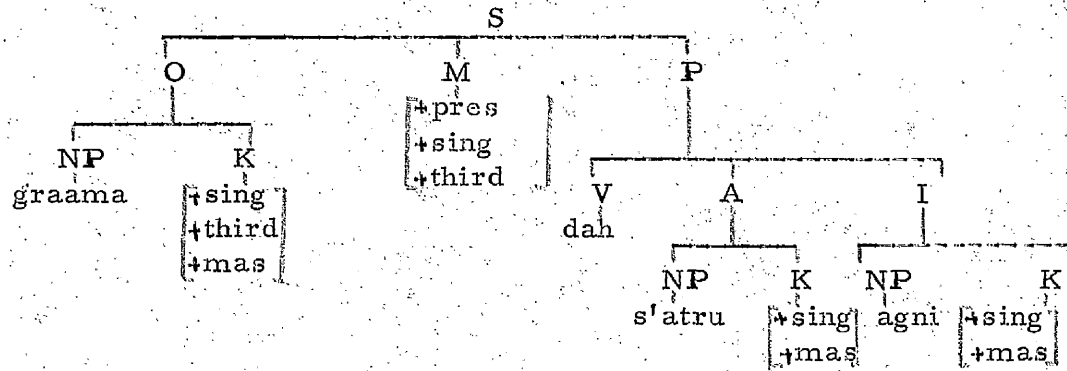
The final form (aside from scrambling) is as given in Figure IV.

Figure IV



Alternatively, if the Subjectivalisation rule does not select A (see f.n. 35) O is selected for subjectivalisation, and the representation is as in Figure V (from Figure I).

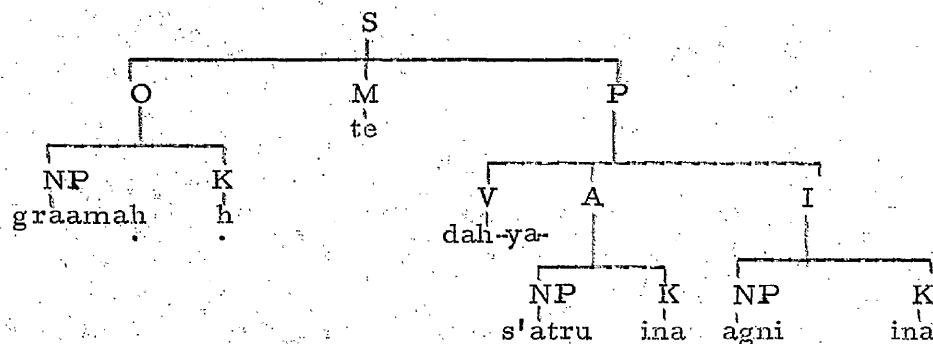
Figure V



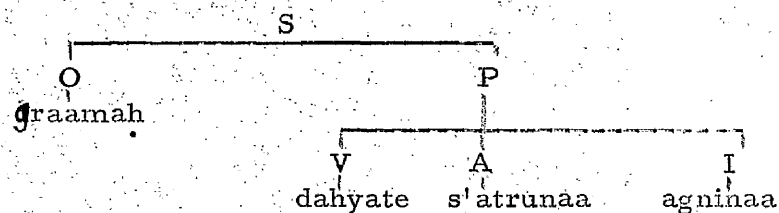
The Affix-substitution rule replaces the features with affixes. It may be noted that if O (or R/F) is selected for subjectivalisation (and A/D is also present in the case-frame), M selects an affix which belongs to the 'te'-class,³⁶ rather than the 'ti'-class, the stem-element -ya- is added to V.³⁷ The result is as in Figure VI.

36. In traditional Sanskrit grammar the 'te'-class and 'ti'-class affixes are referred to as 'aatmane pada' and 'parasmaipada' affixes respectively.

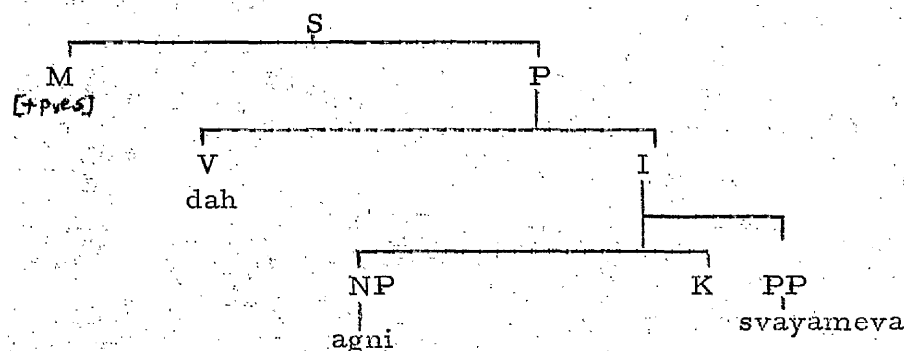
37. The whole process may be referred to as that of passivisation. If the form under the V contains the -ya- element already, no -ya- element is added as 'dāivyat' 'dāivyate'.

Figure VI

The final form is as represented in Figure VII.

Figure VII

Sentences 10, 10' have the underlying structure as in Figure VIII

Figure VIII

It may be noted that I is the only case-category in the case-frame of sentences 10, 10' (like the F/O in 16, 16', 19, 19' and the I in 13, 13').

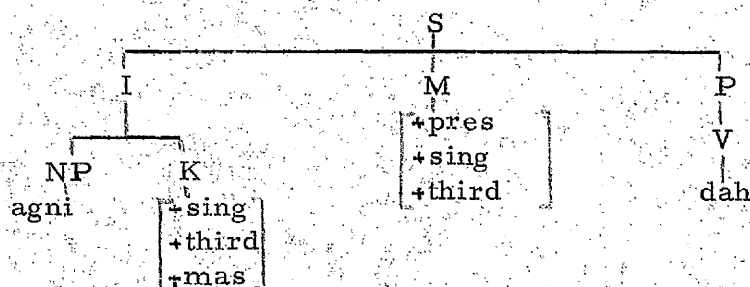
If there is another case-category in the case-frame, I cannot be

selected for the subjectivisation.³⁸ The post-position 'svayameva'

38. A sentence like 'agnih-graamam-dahati' (fire-village-burns; fire burns the village) appears doubtful. Even if it is argued that, in this sentence, the NP 'agnih' indicating a natural phenomenon (cf. II. 3.3.1) behaves idiosyncratically as an I, sentences like 10, 13, 16, 19 do not allow the occurrence of any other case-category in their case-frames if they have to convey the sense of 'svayameva' (by itself) (cf. f.n. 41).

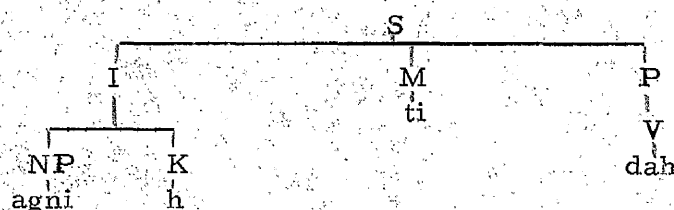
(by itself) bars the occurrence of any other case-category in the case-frame of a simplex. I is selected for subjectivalisation. The P(ost) P(osition) 'svayameva' is deleted optionally. The result is as in Figure IX

Figure IX



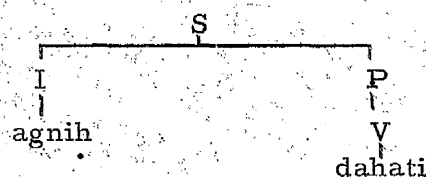
The Affix-substitution rule replaces the features with affixes and the result is as in Figure X.

Figure X



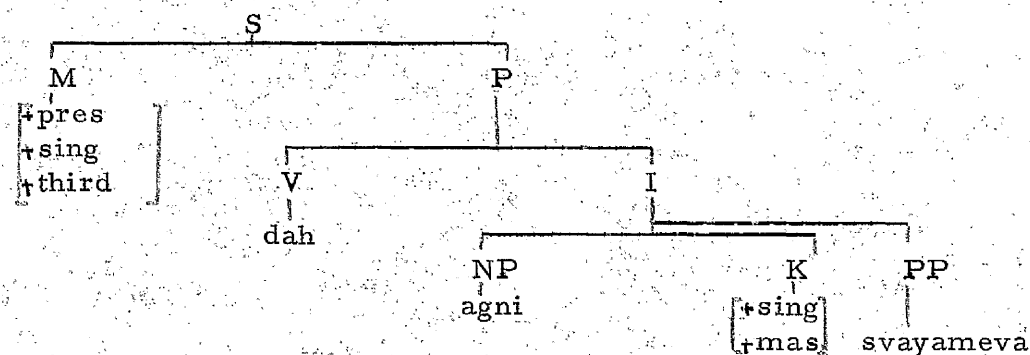
The final form is as represented in Figure XI.

Figure XI

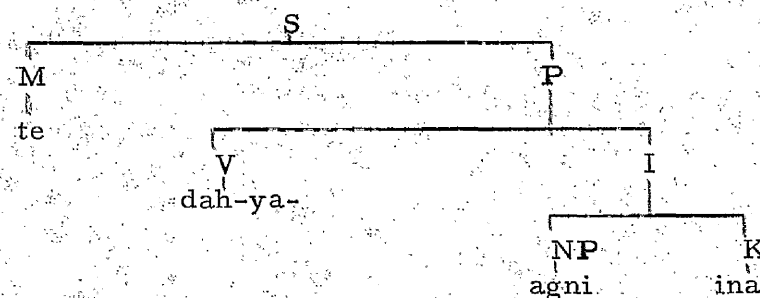
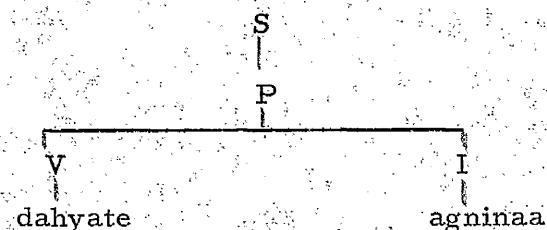


It may be recalled that the Subjectivalisation-rule being optional, it may be that no case-category is selected for subjectivalisation. In such a case, (i) the M indicates [+third], [+singular], (ii) the affix under M shows 'te' rather than 'ti' (iii) and the stem-element -ya- is added to V.³⁹ I is not selected for subjectivalisation and the result is as represented in Figure XII (from Figure VIII).

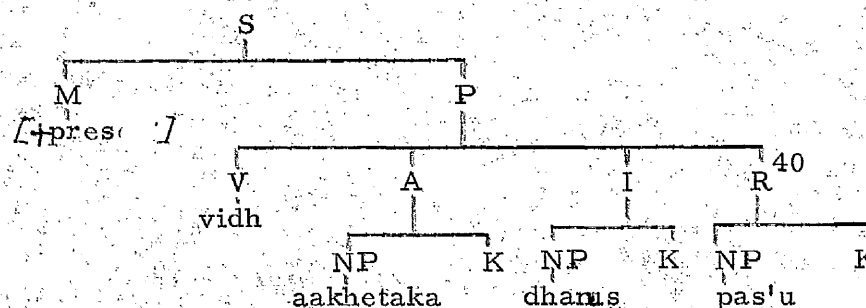
39. Recall the process applied to figure VI (f.n. 37). This process is similar to the earlier with the difference that no case-category is subjectivalised, and consequently the M, as it does not take on the features of number and person of any case-category, always indicates the features third person singular. This process may be referred to as passivisation without subjectivalisation.

Figure XII

The Affix-substitution rule replaces the features with affixes. The Post-position is deleted optionally. The final form is as in Figure XIV via Figure XIII.

Figure XIIIFigure XIV

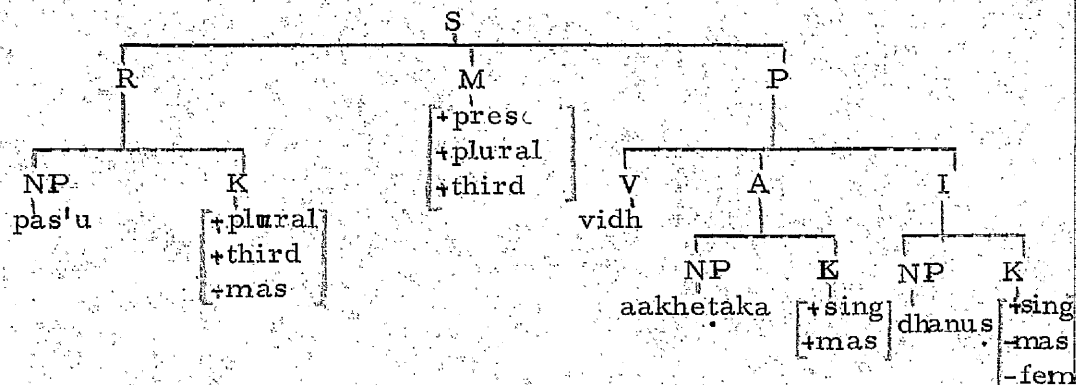
Sentences 11, 12 have the underlying structure as in Figure XV.

Figure XV

40. Here there would be no difference if R is replaced by O. But as mentioned earlier (II.2.1.1) there is need to distinguish a case-category like R from O.

The Subjectivalisation-rule applies and selects A, the process as applied in the case of Figures II, III, IV follows and gives the sentence 11. Alternatively, A is not selected and R being in the case-frame, is selected for subjectivalisation. The result is as in Figure XVI. It may be noted that M indicates the feature [+plural] taken from R.

Figure XVI

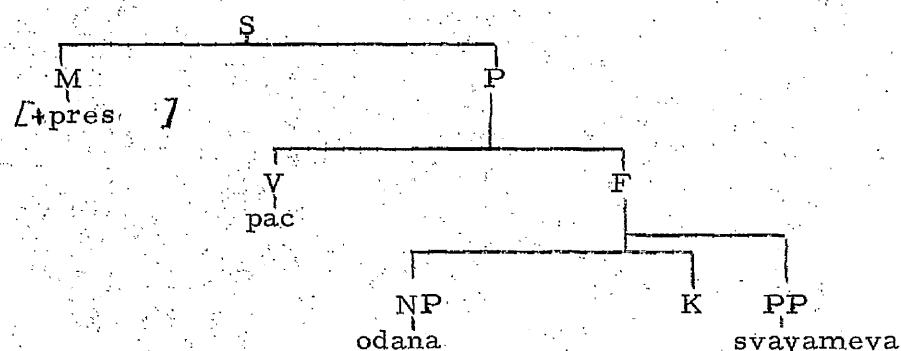


The passivisation-process, ^{as} in the case of Figures VI, VII, applies and gives the sentence 12.

Sentence 13 has a derivation similar to that of sentence 10 (figures VIII, IX, X). If I is not selected for subjectivalisation (as in figure XII), the process of passivisation without subjectivalisation (f. n. 39) applies and through configurations similar to those in figures XII, XIII, XIV, we get sentence 13' above.

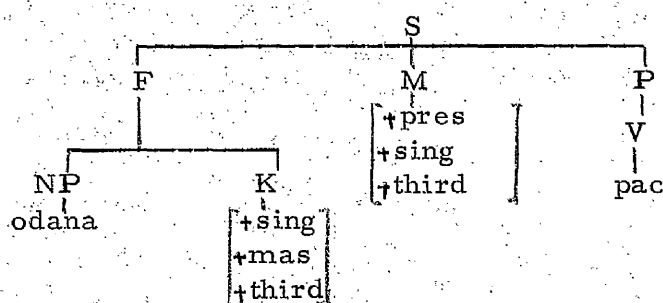
Sentences 14, 17 and 15, 18 have derivations similar to those of 8, 11 and 9, 12 respectively. The derivation of sentence 16 is shown. Sentence 19 has a derivation similar to that of 16 and hence is not shown. Sentence 16 has the underlying structure as in Figure XVII.

Figure XVII



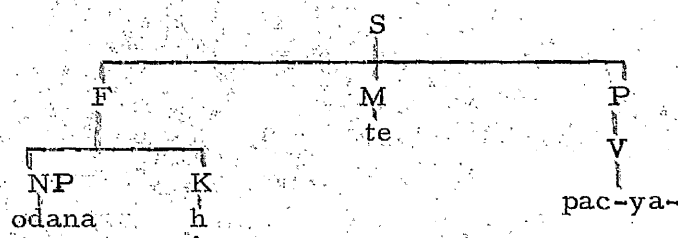
It may be noted that the Subjectivalisation-rule is optional. If A/D also occurs in the case-frame (as in Figure I) in addition to R/O/F/GO and the Subjectivalisation-rule does not select A/D, R/O/F/GO must be selected for agreement with verb. In the above configuration only F occurs (recall sentence 10 has only I in its case-frame)⁴¹ and the Subjectivalisation-rule applies and selects it for agreement with the V. The P(ost)P(osition) 'svayameva' is deleted optionally. The result (omitting intervening details) is as in Figure XVIII.

Figure XVIII

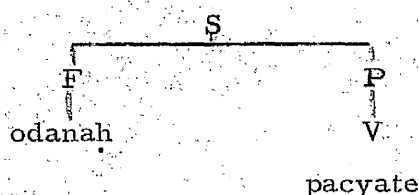


The process of passivisation applies and the Affix-substitution rule operates. The result is as in Figure XIX.

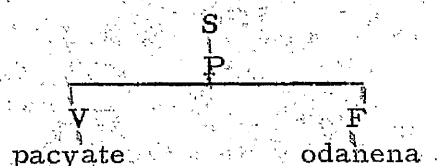
41. f.n. 38 may be recalled. 'agniḥ' (fire) as a natural phenomenon may be subjectivalised, indicating an idiosyncratic characteristic in a construction like 'agniḥ-graamam-dahati'. But, in no case would a sentence like 16 allow the occurrence of another case-category. Besides, if the sense of 'by itself' is to be conveyed, even I in sentence 10 would not allow the occurrence of another case-category.

Figure XIX

The final form is as in figure XX

Figure XX

Again, the Subjectivalisation-rule need not apply at the stage of figure XVII and consequently the process of passivisation without subjectivalisation (as in figure XII) applies and the final form (aside from scrambling) (leaving out the intervening details) is as in figure XXI.

Figure XXI

Sentences 19, 19' will have a derivation similar to that of sentences 16, 16' above (through figures XVII - XXI)

It may be mentioned that sentences 10, 10', 13, 13', 16, 16', 19, 19' - all indicate that the action/process is accomplished easily as indicated by the occurrence of the past position 'svayameva' (by itself) in their underlying structures. Such constructions allow only one case-category (i. e. I/O) in their case-frames. In this sense, sentences 10'' (recall f.n. 16, 19) 13'', 16'' are unacceptable (sentences 13'', 16'' are, anyway, unacceptable).

10". ? agnih - graamam - dahati
 I O
 fire - village - burns
 (fire burns the village)

13". * dhanuh - pas'uun - vidhyati
 I R
 bow - animals - shoots
 (the bow shoots the animals)

16". * odanam - sthaalyaam - pacyate
 F L
 rice - in pot - cooks
 (rice cooks in the pot)

In the case of $[O -]$, but not in the case of $[I -]$, the process of passivisation also operates (cf. sentences 10, 13, 16, 19). Sanskrit grammarians would try to distinguish the verb-forms 'pacyate', 'bhidyate' in 16, 19 from those in 16', 19' on the ground that there being difference in their pitch-accent,⁴² they need to be derived differently. As mentioned in the beginning, no note of pitch-differentiation is taken in this analysis and therefore, there appears to be no necessity to propose different derivational processes for verb-forms 'pacyate' and 'bhidyate' in sentences 16, 19 and 'dahyate' and 'vidhyate' in sentences 10', 13'. This is further supported by the verb-forms 'pacyate' and 'bhidyate' in 16', 19' wherein it would be difficult to separate the two processes.

II. 2.1.3.1. In this sub-section, a set of sentences is considered in which there is subjectivalisation of a case-category other than R/O/F (which are present in the case-frame), in case the Subjectivalisation-rule does not select A/D. Consider sentences 20", 21", 22", 23"

42. Singh, J.D. (1970): pp. 33-34.

wherein a case-category cooccurring with R/O/F enters into agreement with V as A/D is not selected for subjectivalisation.

20. gopah - goh - dugdham - dogdhi
A nom SO ab F acc
milkman - from cow - milk - milks

20'. gopah - gaam - dugdham - dogdhi
A nom SO acc F acc
milkman - cow - milk - milks

both = (milkman milks milk from the cow)

20''. gopena - gauh - dugdham - duhyate
A i SO nom F acc
by milkman - cow - milk - is milked

(milk is milked from the cow by the milkman)

21. suudah - tandulebhyah⁴³ - odanam - pacati
A nom SO ab F acc
cook - from rice - boiled rice - cooks

21'. suudah - tandulaan - odanam - pacati
A nom SO acc F acc
cook - rice - boiled rice - cooks

both = (cook cooks boiled rice out of rice)

21''. suudena - tandulaah - odanam - pacyante
A i SO nom F acc
by cook - rice(s) - boiled rice - are cooked

(boiled rice is cooked out of rice by the cook)

43. Later Sanskrit commentators consider it to be 'karaṇa' (INSTRUMENTAL : upper face indicates that it is not to be identified with I/i), which appears to be wrong. cf. Roy, S. (1920), p. 12: he says that it could be either 'karaṇa' or 'apaadaana' (SOURCE). cf. Bhattojidsita, (p. 523): 'tattvabodhinii' commentary says it is 'karaṇa' and (by implication) 'adhikaraṇa' (LOCATIVE).

On the other hand Patañjali mentions 'edhaḥ' (fuel) as 'karaṇa', and not 'tandula' (rice); p. 325. He gives a Genitive form of 'tandula' as in 'tandulaanaam - odanam - pacati' (of rices- boiled rice - (he) cooks (he cooks boiled rice with rice)), p. 332.

22. guruh - s'iṣyaaya - dharmam - bruute
 A nom R d O acc
 teacher - for pupil - religion - talks

22'. guruh - s'iṣyam - dharmam - bruute
 A nom R acc O acc
 teacher - pupil - religion - talks

both = (the teacher talks on religion to the pupil)

22'' gurunaa - s'iṣyah - dharmam - ucyate
 A i R nom O acc
 by teacher - pupil - religion - is talked

(pupil is talked to by the teacher about religion)

23. baalakah - saarameyam - vraje - runaddhi
 A nom R acc L l
 boy - dog - in enclosure - holds

23'. baalakah - saarameyam - vrajam - runaddhi
 A nom R acc L acc
 boy - dog - in enclosure - holds

both = (the boy holds the dog in an enclosure)

23''' baalakena - saarameyam - vrajah - rudhyate
 A i R acc L nom
 by boy - dog - in enclosure - is held

(the dog is held in an enclosure by the boy)

It may be noted that in sentence 22R and O cooccur and it is R, and not O, that enters into agreement with V in sentence 22''. This selection of a case-category other than R/O/F for agreement with V, if A/D occurs in the case-frame and is not selected for subjectivalisation, is limited to a set of twelve verbs. Of these four are given above (20-23). There has been some disagreement among the traditional

grammarians regarding the exact number of such verbs.⁴⁴

II.2.1.3.2. In this sub-section, a further set of sentences which allow a case-category other than R/O/F to be in agreement with V, in case A/D is not selected for subjectivalisation, is considered. In sentences 24'', 26'' L and I are in agreement with the V respectively. This selection of L and I induces the operation of the process of passivization and is conditioned by the occurrence of the pre-verb 'adhi' with the verbs 'śete'/tiṣṭhati/aaste' (sleeps/sits/stays) in sentence 24'' and by the occurrence of the verb 'dīvyati' (gambles) in sentence 26''. (cf. in sentences 24'', 26'' L and I are not in agreement with the V respectively and passivisation without subjectivalisation takes place).

24. sundarii - s'ayane - s'ete/tiṣṭhati/aaste
 A nom L I
 beautiful lady - in bed - sleeps/sits/stays
- 24'. sundarii - s'ayanam - adhi - s'ete/tiṣṭhati/aaste
 A nom L acc
 beautiful lady - in bed - sleeps/sits/stays
- both = (a beautiful lady sits/sleeps/stays in bed)

-
44. Roy, S., (1920), p.11: he quotes Bhaṭṭojidiikṣita's list of 12 verbs: (i) dogdhi (milks), (ii) yaacate (begs), (iii) prcchati (asks), (iv) runaddhi (holds), (v) bruute (speaks), (vi) s'aasti (instructs), (vii) paṇati (cooks), (viii) cinoti (gathers) (ix) jayati (wins), (x) mathnaati (churns), (xi) muṣṇaati (steals), (xii) dandayati (punishes). cf. Subrahmanya Sastri, P.S. (1970) (vol.V) p.110: he refers to Patañjali's list which contains the first six of Bhaṭṭojidiikṣita's list and (vii) bhikṣate (begs). Kaiyaṭa adds (ix), (xi), (xii) of Bhaṭṭojidiikṣita's list to that of Patañjali. cf. Bhojadeva (1100 A.D.), p.13: he refers to the list of Bhaṭṭojidiikṣita and Patañjali and adds two to their lists: (i) 'karoti' (does), (ii) 'grhṇaati' (takes).

24". sundaryaa - s'ayanam - adhi-s'ayyate/sthiyyate/aasyate
 A i L nom
 by beautiful lady - bed - is slept in/sat into/stayed in
 (the bed is slept/sat/stayed in by a beautiful lady)

24'''. sundaryaa - s'ayane - s'ayyate/sthiyyate/aasyate
 A i L l
 by beautiful lady - in bed - is slept in/sat into/ stayed in
 (the bed is slept in/sat in/stayed in by a beautiful lady)

It may be noted that sentences 25, 25' are unacceptable.

25. * sundaryaa - s'ayane - adhi-s'ayyate/sthiyyate/aasyate
 A i L l
 by beautiful lady - in bed - is slept in/sat into/stayed in

25'. * sundaryaa - s'ayanam - s'ayyate/sthiyyate/aasyate
 A i L nom
 by beautiful lady - bed - is slept in/sat into/stayed in

In sentence 26 I cooccurs with A. In sentence 26'', A is not subjectivalised and I being optionally selected for agreement with the V, the process of passivisation operates. But in sentence 26''' I is not selected for agreement with V and passivisation without subjectivalisation takes place.

26. dyuutakarah - akṣaiḥ - diivyati
 A nom I i
 gambler - with dice - gambles
 (a gambler gambles with dice)

26'. dyuutakarah - akṣaan - diivyati
 A nom I acc
 gambler - dice - gambles
 (a gambler gambles with dice)

26''. dyuutakarena - akṣaah - diivyante
 A i I nom
 by gambler - dice - are played
 (dice are played by a gambler)

26'''. dyuutakarena - akṣaiḥ - diivyate
 A i I
 by gambler - with dice is played
 ((it) is played with dice by a gambler)

Before concluding this subsection it is worth noting that the process of passivisation may operate but R/O need not be selected for agreement with V due to co-occurrence of some post-position. In sentences 28, 29, 30 the occurrence of 'prati' and 'antarena' blocks the selection of R and O for agreement with the V as in sentences 28', 29', 30'. However, the process of passivisation without subjectivisation applies.

28. guruh - s'isyam - prati - vadati
 A nom R acc
 teacher - pupil to - speaks
 (the teacher speaks to the pupil)

28'. gurunaa - s'isyam - prati - ucyate
 A i R acc
 by teacher - pupil to - is spoken
 (pupil is spoken to by the teacher)

29. svaamii - geham prati - pas'yati
 D nom O acc
 owner - house to - sees
 (the owner looks at the house)

29'. svaaminaa - geham prati - drs'yate
 D i O acc
 by the owner - house to - is seen
 (the house is looked at by the owner)

30. maataa - putram antarena - cintayati
 D nom R acc
 mother - son about - worries
 (mother worries about (her) son)

30'. maatrasa - putram ^{antarena}prati - cintyate
 D i R acc
 by mother - son about - is worried
 ((it) is worried about son by the mother).

It may be noted that sentences 28'', 29'', 30'' which undergo the process of passivisation along with the selection of R and O for agreement with

the V are unacceptable.

- 28". * gurunaa - śiṣyaḥ prati - ucyate
 A i R nom
 by teacher - pupil to - is spoken
- 29". * svaaminaa - geham prati - drs'yate
 A i O nom
 by owner house to is seen
- 30". maatraa - putrah antarena - cintyate
 A i R nom
 by mother - son about - is worried

In case the post-positions 'prati' and 'antarena' do not occur, the R/O agrees with the V and the process of passivisation applies and we obtain sentences 31, 32, 33.

31. gurunaa - s'iṣyaḥ - ucyate
 A i R nom
 by teacher - pupil - is spoken
 (the pupil is spoken to by the teacher)
32. svaaminaa - geham - drsyate
 D i O nom
 by the owner - house - is seen
 (the house is looked at by the owner)
33. maatraa - putrah - cintyate
 D i R
 by mother - son - is worried
 ((it) is worried about son by the mother)

It may be noted that sentences 31', 32', 33' with R/O not in agreement with the V and the process of passivisation operating, are unacceptable.

- 31'. * gurunaa - s'iṣyam - ucyate
 A i R acc
 by teacher - pupil - is spoken
- 32'. * svaaminaa - geham - drs'yate
 D i O acc
 by owner - house - is seen
- 33'. * maatraa - putram - cintyate
 D i R acc
 by mother - son - is worried

II.2.1.4. In this sub-section, a set of sentences in which A/D is obligatorily deleted (in fact A/D is a dummy) and O is obligatorily subjectivalised along with the process of passivisation operating, is considered. The case-category O may dominate an embedded S as well, as in sentence 35. Consider sentences 34, 35.

34. raastra-gaanam - giivate
 O nom
 national anthem - is sung
 (national anthem is sung)

35. s'ruivate - / landane - viktoriyaa naamnii samraajñii - avasat/
 O L I A nom nom O
 is heard - in London victoria-named empress lived
 (it is said there lived an empress named Victoria in London)

Sentence 34 has the underlying structure as in figure XXII and 35 as in figure XXIII.

Figure XXII

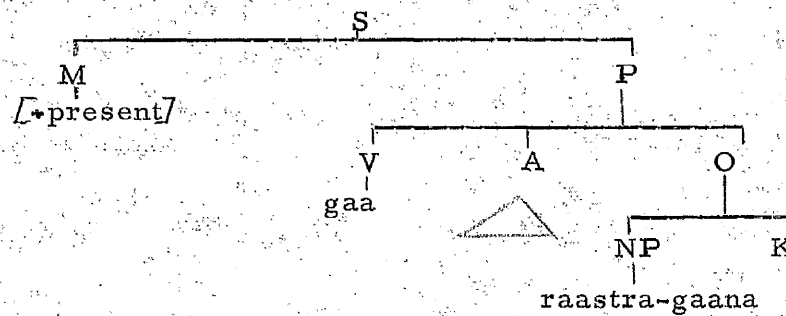
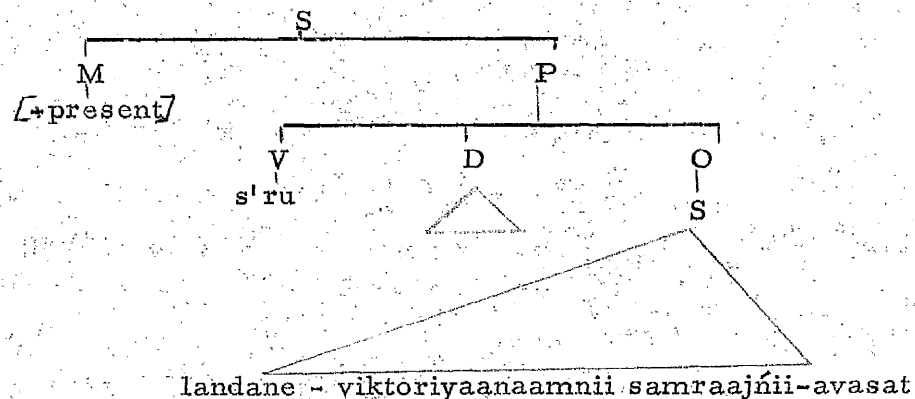


Figure XXIII



II.2.2. In this sub-section the case-category F(active) / Re(sult) as distinct from O is discussed and its relation to cognate objects is examined.

II.2.2.1. The case-category F is proposed in 'the Case for Case'.⁴⁵

In 'Types of Lexical Information',⁴⁶ F is replaced with Re. But this change in nomenclature is not followed by any discussion at all and thus it is of no relevance. Besides, Re as defined above, is covered by F. Recently, the elimination of F/Re as a distinct case-category has been proposed.⁴⁷ According to this latter proposal, F/Re may be covered by GO(al). But consider sentences like 36, 37.

36. suudah - bhaktam - pacati
 A F
 cook - boiled rice - cooks
 (the cook cooks boiled rice)

37. kaviḥ - giitam - racayati
 A F
 poet - song - composes
 (the poet composes a song)

The case-category F as specified in sentences 36, 37 (according to 'Pre-Problems' definitions) would be replaced by GO(al) following the 'Post-Problems' position of Fillmore. But, even accepting his definition

45. Fillmore, C.J. (1968a), p.25: "the case of the object or being resulting from the action or state identified by the verb, or understood as a part of the meaning of the verb". This definition has two parts which are taken up later (II.2.2.2).

46. Fillmore, C.J., (1969), p.116: "the entity that comes into existence as a result of the action".

47. Fillmore, C.J., (1971), pp.251-252: "Since the Goal case is used to indicate the later stage or end result of some action or change, it can absorb what I used to call 'Resultative' or 'Factitive', that is, it specifies the end-result role of a thing which comes into existence as a result of the action identified by the predicator, as in /I wrote a poem/ or /I constructed a bridge/". As Fillmore's above proposal occurs in 'Some Problems for Case Grammar', I would refer to the earlier position (as in f.n. 45, 46 above) as 'Pre-Problems' position'.

of Goal,⁴⁸ it does not appear to assign the GO to the NPs specified as F above. Secondly, if his contention is accepted, even O in sentence 38 could be a GO.

38. maataa - patram - pathati
 A nom O acc
 mother - letter - reads
 (mother reads the letter)

However, he gives only six lines to his suggestion (f.n. 47). Considering all these, it is appropriate that the discussion of F/Re (and also of O and cognate objects) is confined to their treatment in 'the Case for Case' (f.n. 45).

II.2.2.2 Now the question is: is the case-category F syntactically justified? Is it related to cognate objects and does the concept of cognate objects support its postulation?

Consider sentences 39, 41 and 40, 42 in which the NP's 'patram' and 'aasandii' are assigned the case-categories F and O respectively.

39. saa - patram - likhati
 A F
 she - letter - writes
 (she writes a letter)
40. saa - patram - pathati
 A O
 she - letter - reads
 (she reads a letter)
41. takṣakah - aasandiim - nirmaati
 A F
 carpenter - chair - makes
 (the carpenter makes a chair)

48. See II.4.6.

42. takṣakah - aasandiim - bhanakti
 A O
 carpenter - chair - breaks
 (the carpenter breaks the chair)

Sentences 40, 42, but not 39, 41, are possible in reply to sentence 43, because they (40, 42) indicate the existence of letter/chair prior to the initiation of the action.

43. saa / takṣakah - patrasya / aasandyaah - kim - karoti
 she / carpenter - of letter / of chair - what - does
 (what does she/carpenter do to the letter/chair?)

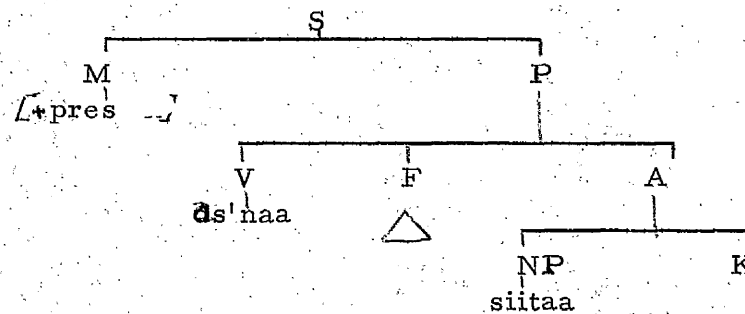
Fillmore brings in the notion of cognate objects⁴⁹ to justify the postulation of F. Sentences with cognate objects "are constructions in which at the very least, there is a high selectivity between a specific V and an object N, and in which the V + N combination in one language might well be matched by a V alone in another."⁵⁰ Consider sentences like 44, 45.

44. siitaa - aśanam - as'naati
 s. - food/meal - eats
 (s. eats (her) meal)
45. siitaa - aśanam - karoti
 s. - eating - does
 (s. eats)

According to Fillmore, sentences parallel to 44, 45 have the underlying structure as in figure XXIV with F dominating a dummy (irrelevant details are eliminated).

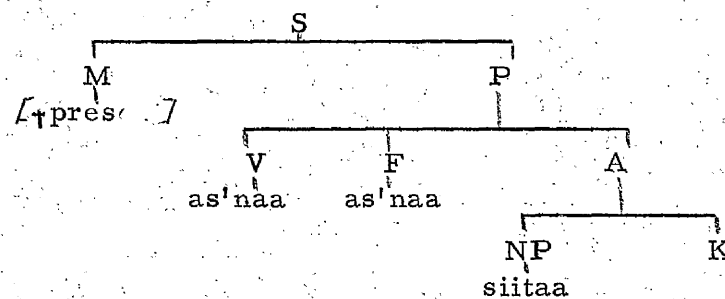
49. Fillmore, C.J. (1968a), pp. 85-86: under the section 'problems and suggestions'.

50. Fillmore, C.J., (1968a), p. 85: But even in the same language a V + N construction may match with a V construction (sentences 44, 45 above).

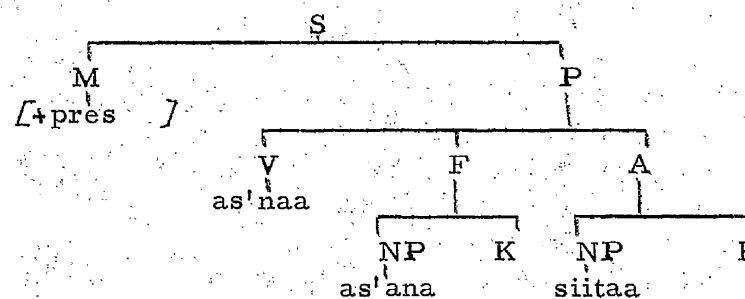
Figure XXIV

A copying rule then fills the dummy under F with the item under V.

The result is as in figure XXV.

Figure XXV

By another rule the V under F assumes the form of N (as in figure XXVI).

Figure XXVI

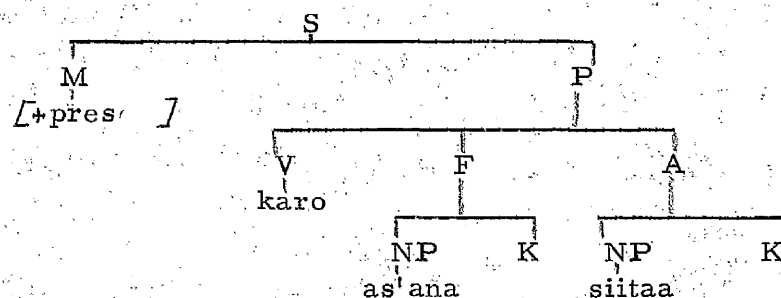
Fillmore proposes one rule⁵¹ to combine the two processes: "copy the N-representative of the V under the F". At the stage of figure XXVI, sentence 44 is derived. Alternatively, by a rule⁵² the V assumes a

51. Fillmore, C.J., (1968a), p. 85.

52. Fillmore, C.J., (1968a), p. 85: 'Replace the V by the designated pro-V.' In Sanskrit, there is no verb-form comparable to 'have' in English which acts a pro-verb among others. However, the verb-form 'karoti' (sentences 45, 46) functions as a pro-verb in a large number of constructions.

pro-V form and the result is as in figure XXVII.

Figure XXVII



Sentence 45 is derived from a configuration as represented in figure XXVII. Fillmore's rule (ii) appears to be an oversimplification.

"Traditional grammars call objects like song, sleep, breath 'cognates' because the noun in the so-called direct object position is morphologically related to the verb."⁵³ This definition of cognate objects is covered by the first rule (of Fillmore), but not by the second rule. Thus, according to this, sentence 45 would not be related to cognate objects. Fillmore would like to extend the definition of cognate objects.⁵⁴ Thus he would consider a sentence like 45 as well as a sentence like 46 related to cognate objects (it may be noted that sentence like 46' is unacceptable. Sentence 46'' is acceptable, but, then, sentences 46', 46'' are not synonymous).

46. siitaa - s'ayanam - karoti
 A
 s. - sleeping - does
 (s. sleeps)

53. Baron, N.S., (1971), p.71.

54. Fillmore, C.J., (1968a), p. 85: 'Some words may be treated as cognate-object V's even though the rule for replacing the pro-V is obligatory.' His example is 'nightmare nightmare'

V F

=> 'have nightmare' (p.86).

F

46'. * siitaa - s'ayanam - sete
s. - sleeping - sleeps

46". siitaa - s'ayane - sete
A L
s. - in bed - sleeps

(s. sleeps in bed)

Fillmore's extension of cognate objects to cover sentences

like 45, 46 is not discussed here further, as I do not support the position that the concept of cognate objects is relevant for the postulation of the case-category F as it is evident from the discussion below.

Now, examine the relationship between cognate objects and F.

Recall the definition of F (f. n. 45) and consider sentences 47-50 along with 44, 45.

47. paṭakaarah - paṭam - vayati
A F
weaver - cloth - weaves

(the weaver weaves a cloth)

48. muurtikaarah - muurtim - racayati
A F
idol-maker - idol - makes

(an idol-maker makes an idol)

49. sa - bhuNkte : eats } bhojanam : eating } - karoti
he - { gacchati : goes } gamanam : going } - does
pathati : reads } pathanam : reading }

50. sundarii - madanlekham - likhati
A F
beautiful lady - love letter - writes

(the beautiful lady writes a love letter)

Sentences 44 and 45 are not parallels. Sentence 44 cannot have a continuation as in 44', but 45 can have as in 45'.

44'. * siitaa - rotikaayaah - as'anam-as'naati
A
s. - of bread - food - eats

45'. siitaa - rotikaayaah - as'anam - karoti
A
s. - of bread - eating - does

Sentences 45, 46, 49 can be considered to contain cognate objects (this is an extension of the concept of cognate objects by Fillmore as mentioned above) and can be specified as F only when the part II of the definition of F (i. e. "understood as a part of the meaning of the verb" (f. n. 45) is taken into account. But if this is so, how is F distinct from O, at least partially (c. f. II. 2. 1. 1, the first part of the definition of O)? As explicated above, the concept of cognate objects does not appear to account for the case-category F. And as this is so, there is no need to retain the part two of the definition of F as its sole purpose has been to account for instances like 45, 46, 49 above. The process of nominalisation (see IV. 3. 2) may account for the phenomenon of cognate objects.

II. 2. 2. 3 In this sub-section I revert to the problem of the status of F as a distinct case-category. There has been a suggestion⁵⁶ to distinguish the performance of a song which is already in existence from the creation of a new song by singing as in sentences 51, 52.

51. saa - [jayadevasya - giitam] - gaayati
 A O g
 she - of j. - song - sings
 (she sings the song of j i. e. composed by j)

52. saa - giitam - gaayati
 A F/O
 she - song - sings
 (she sings a song)

Sentences like 52 are ambiguous because the song may be already composed (as in sentence 51) or is being created while singing.

56. Lehrer, Adrienne, (1970), p. 249.

Consider sentences 53-56 which indicate the indeterminacy of any semantic criterion to distinguish F from O.

53. maataa - dugdham - pacati
 A O
 mother - milk - boiled
 (mother boils milk)
54. suudah - tandulaan / maamsam - pacati
 O O
 cook - rice / meat - cooks
 (cook cooks rice/meat)
55. saa - rotikaam - pacati
 she - bread - cooks
 (she cooks bread)
56. sa - bhojanam - pacati
 F
 he - food - cooks
 (he cooks food)

In the sentences 53-56, the verb-form 'pacati' occurs in the context of the NP's whose status as F/O cannot be specified on the basis of semantic criterion only. In 53, 'dugdham' is O, and not F, as its resultative aspect is insignificant. In 54 which stage do the NPs specified as F indicate? rice and meat when they are put on the oven or when they are taken off the oven? In sentence 55, the NP 'rotikaam' (bread) is F to an Indian, but an O to an Englishman. And, in 56, the resultative aspect of 'bhojanam' is definitely relevant. All these might suggest that resultative and non-resultative are points along a semantic continuum.⁵⁷

57. Baron, N.S., (1971), p. 75.

However, in this situation, the relevance of a syntactic criterion cannot be ignored. In the beginning of the subsection II.2.2.2 reference is made to one syntactic criterion for the distinction between F and O and whose application successfully specifies the case-categories in sentences 53-56. In case of sentence 55, the case-category F is assigned to 'rotikaam' (bread), because, in Sanskrit, sentence 55 is not possible as a reply to the query 'saa - rotikaayaah - kim - karoti?' (she - of bread - what - does).

There has been a suggestion⁵⁸ to eliminate the case-category F. The reason given is the indeterminacy arising out of the application of a semantic criterion. But this situation may obtain in the case of other case-categories as well and it is precisely in such situations that syntactic criterion plays a crucial role. It has been further suggested⁵⁹ that the motivation for postulating a case-category like F lies in the adherence of the rule that there should not be more than one occurrence of one case-category in a simple sentence. Thus in a sentence like 'he had a dream about Mary' the caseframe, as suggested, is $[D + F + O \rightarrow]$ rather than $[D + O + O \rightarrow]$. But this suggestion does not solve the problem. There are similar sentences like 'he thought about the plan / about the child', 'the teacher talked about the student', in which the case-category O/R could be assigned to the NP's/^{underlined}. A case-category like 'referential' has been suggested (but not developed) by some linguists.⁶⁰ Whatever may be the ultimate selection, the postulation of F appears to be only a partial solution of this problem.

-
58. Baron, N.S., (1971), p. 75. cf. Fillmore, C.J., (1971): he proposes to drop F and assign GO to the NP's concerned (see f.n. 47).
 59. Baron, N.S., (1971), p. 77.
 60. Stockwell, R.P. et. al., (1968), vol. II, p. 957.

II. 3. The case-category I(nstrumental) is assigned to an NP which is "the inanimate force or object causally involved in the action or state identified by the verb."⁶¹ If the NP (acting as an argument of a verb) is not inanimate, the case-category assigned to it, cannot be an I. Thus sentence 1 has an I, but not sentences 2 and 3. Sentence 2 is unacceptable.⁶²

1. raamah - kalamena - likhati
 A nom I i
 r. - with pen - writes
 (r. writes with a pen)
2. raamah - baalakena - likhati
 A nom I i
 r. - with boy - writes
3. raamah - baalakena - lekhayati⁶³
 PR A
 r. - by boy - makes write
 (r. makes the boy write)

-
61. Fillmore, C.J., (1968a), p. 24.
 * cf. id., (1969), p. 116: "the stimulus or immediate physical cause of an event"
 cf. id. (1971), p. 251: "the case of immediate cause of an event or the stimulus, the thing reacted to"
62. Sentence 2 is acceptable, if interpreted as an instance of Comitative (see V. 2.) and as an alternative form of 'raamah - baalakena - saha - likhati' <= "raamah - baalakah - ca - likhatah" (r. and the boy write).
63. PR(ompter) refers to the case-category which initiates an action /state identified by the verb, in addition to an A(gentive). These constructions containing PR and A, may be referred to as causative constructions. Such constructions being complex, there is no inconsistency if PR also is referred to as A/D (as the case may be). However, PR is used to distinguish it from A/D of the embedded S and secondly the use of PR indicates the neutralisation of A/D in the matrix S (i. e. the matrix S would show PR in place of A/D).
- Causative constructions do not necessarily involve morphological distinction of verbal forms. Sentence A is a non-causative construction, sentence B is a causative one.

/contd.

In a sentence like 4, the NP 'hastinaa' specified as I should be interpreted as 'with the body of an elephant' (hastinah - s'ariirena)⁶⁴
This is supported by the unacceptability of a sentence like 5.⁶⁵

4. sa - hastinaa - dyaaram - runaddhi
 A I O
 he - with elephant - door - obstructs

 (he obstructs the door with an elephant)

5. * sa - baalakena - patram - likhati
 A I O
 he - with boy - letter - writes

The above characteristic of I becomes explicit if sentences 6 and 7 are compared. Sentence 6 is derived from an underlying structure as represented in figure I. But sentence 7 has an underlying structure which is not complex (as in figure II).

6. svaamii - sevakena - bhittim - paatayati
 PR A O
 master - by servant - wall - makes fall

 (master makes the servant knock the wall over)
7. svaamii - khanitreṇa - bhittim - paatayati
 A I O
 master with spade - wall - makes fall

 (master knocks the wall over with a spade)

63. (contd.)

- A. baalakah - pustakaani - ganayati
 A nom O acc
 boy - books - counts
 (the boy counts books)
- B. pitaa - baalakena - pustakaani - ganayati
 PR nom A i O acc
 father - by boy - books - makes count
 (the father makes the boy count the books)

As mentioned earlier (II.1.1 f.n.7), causative constructions are not considered for case-specification in this study.

64. Fillmore, C.J.(1968a), p.24 (f.n.32): he refers to and discusses an example suggested by P. Postal: 'I rapped him on the head with a snake!'.

65. Refer to f.n.62 above, sentence 5 like sentence 4, is acceptable if it is interpreted as an instance of Com.

Figure I

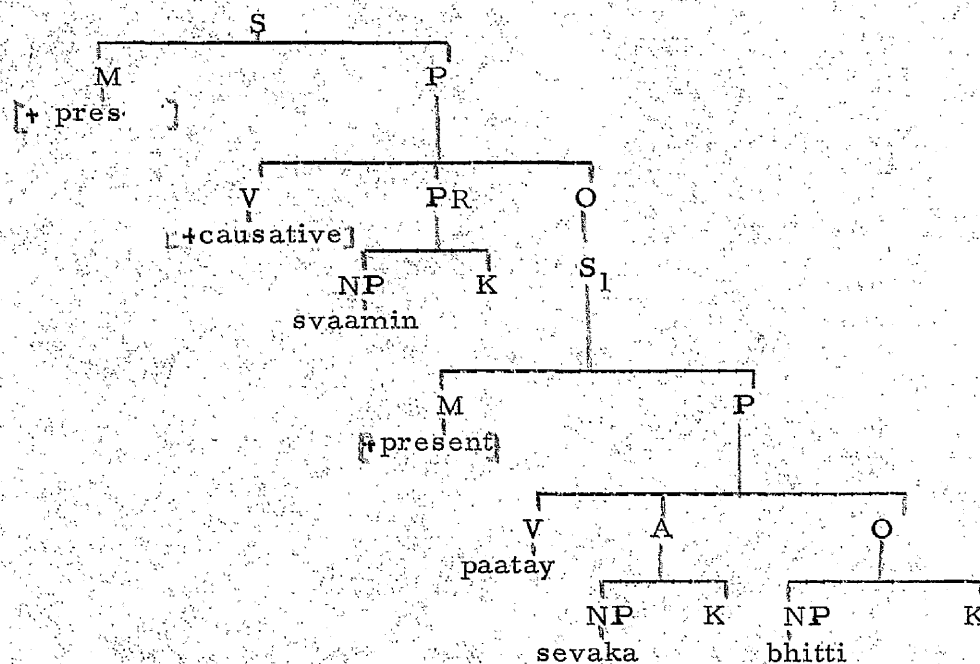
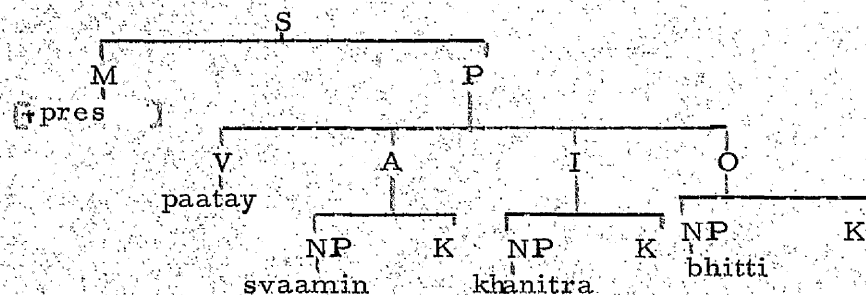


Figure II



II.3.1. The case-category I is distinguished from A/D/R/O/F. It is distinct from A/D as a subjectivisation-rule normally selects A/D for subjectivisation and not I. If A/D is not selected and R and/ I are present in the case-frame, the process of passivisation applies to R but not to I. If I is the only case-category in addition to A/D which has not been subjectivised, the process of passivisation without subjectivisation operates.⁶⁶ Moreover, A/D/R are assigned to NP's which

66. For details see II.1.1.

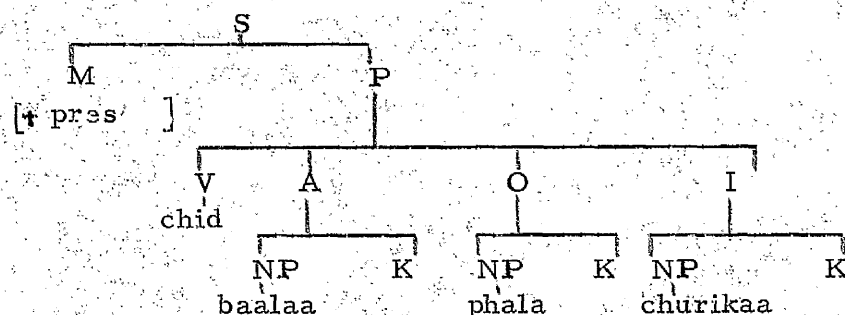
are I + animateI, but I is not.

The case-category I is also distinct from F/O though both are assigned to NP's which are I - animateI. If a case-frame contains the case-categories A, I, O and A is not selected for agreement with the V, then it is O rather than I which is selected by the process of passivisation. Thus a sentence like 8 would correspond to 9 wherein O, not I, enters into agreement with the V. If I is selected for agreement (as in sentence 10), the sentence is unacceptable.

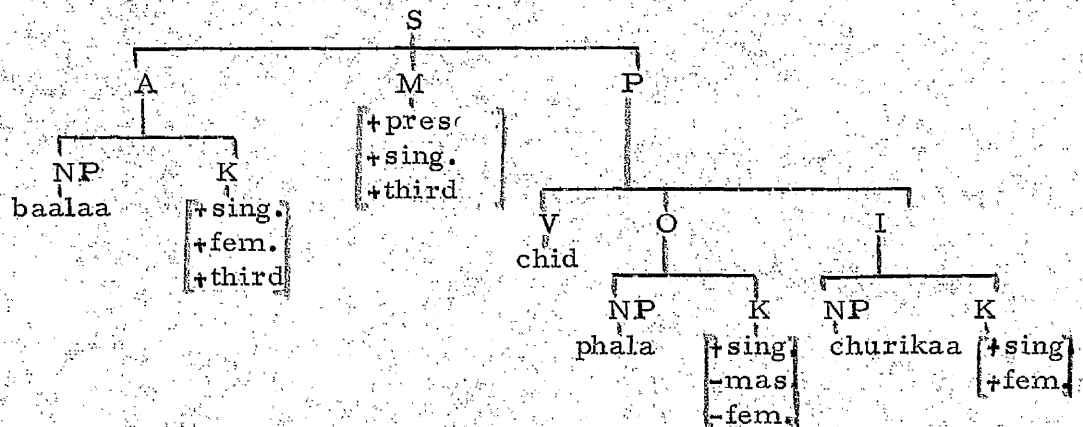
8. baalaa - churikayaa - phalam - chinatti
 A nom I i O acc
 girl - with knife - fruit - cuts
 (the girl cuts fruit with a knife)
9. baalayaa - churikayaa - phalam - chidyate
 A i I i O nom
 by girl - with knife - fruit - is cut
 (fruit is cut with a knife by the girl)
10. * baalayaa - churikaa - phalam - chinatti/chidyate
 A i I nom O acc/nom
 by girl - knife - fruit - cuts / is cut

Sentences 8, 9 have the underlying structure as in figure III.

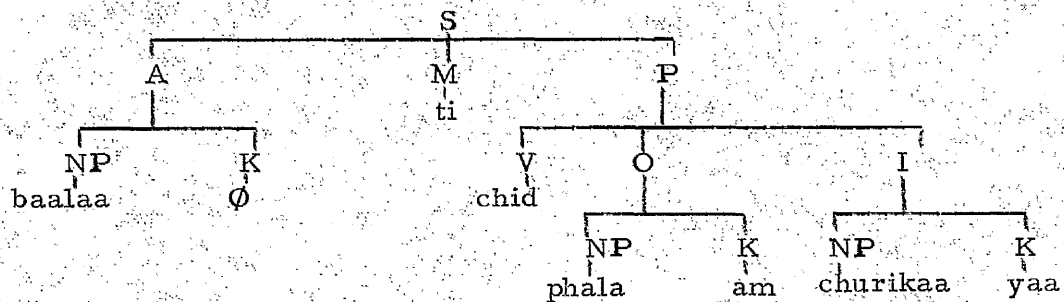
Figure III



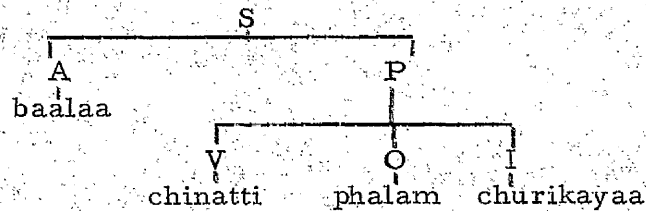
The subjectivalisation-rule applies and selects A for agreement with the V, the result is as in figure IV.

Figure IV

The affix-substitution rule substitutes the features with affixes and the result is as represented in figure V.

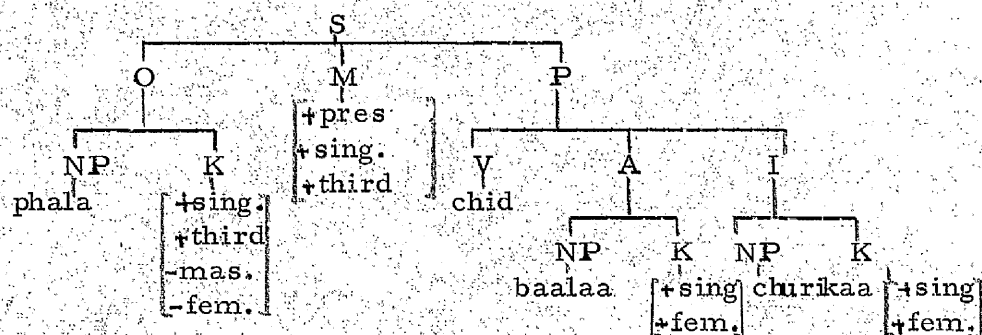
Figure V

The final form is as represented in figure VI.

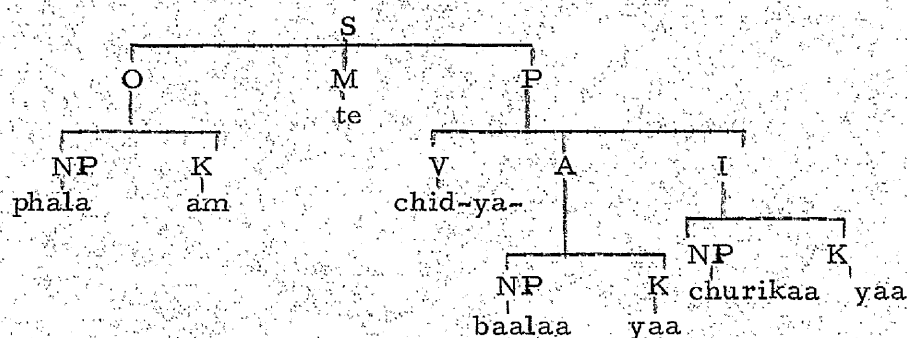
Figure VI

Alternatively, if A is not selected for subjectivalisation at the stage of figure III the process of passivisation⁶⁷ applies. The result is as represented in figure VII (from figure I).

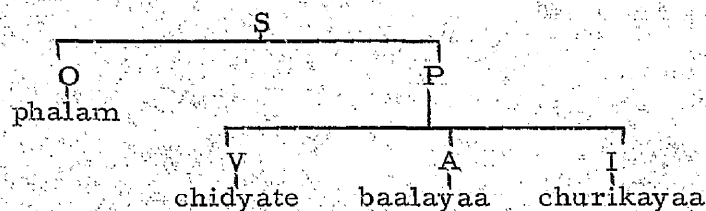
67. For details see II.1.1. and II.2.1.2.

Figure VII

The affix-substitution rule applies and the result is as in figure VIII.

Figure VIII

The final form is as given in figure IX.

Figure IX

It may be noted that a sentence like 11, with no A in its case-frame, is suspect.

11. * churikaa - phalam - chinatti
 I O
 knife - fruit - cuts

II. 3. 2. 1. In this sub-section certain syntactic peculiarities of I are considered.

Consider a sentence like 12 in which I is the only case-category present.

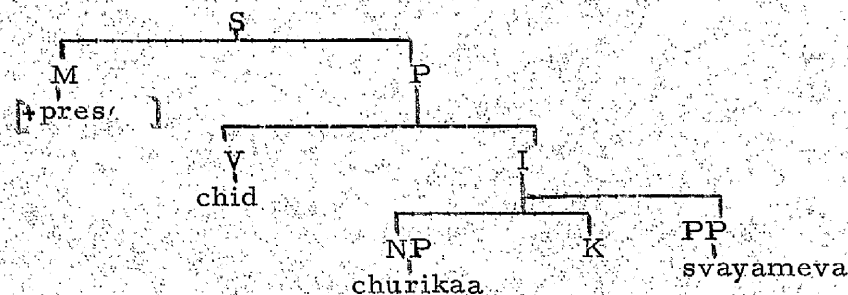
12. churikaa - (svayameva) - chinatti
 I nom
 knife - by itself - cuts
 (the knife cuts by itself)

In constructions like 12, the I conveys the performance of action with ease or without effort.⁶⁸ The subjectivalisation-rule which has selected I for agreement with the V in 12 is optional. If the rule does not apply, sentence 12' is the alternative form.

- 12'. churikayaa - (svayameva) - chidyate
 I i
 by knife - (by itself) - is cut
 ((it) is cut by the knife by itself)

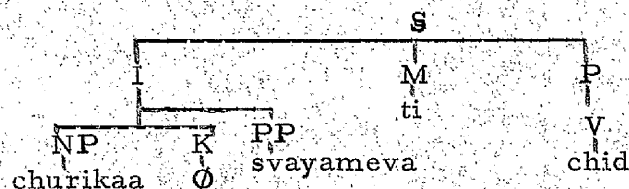
Sentences 12, 12' have the underlying-structure as in figure X.

Figure X



The subjectivalisation-rule applies and the affix-substitution rule replaces the features with affixes and the result is as represented in figure XI (omitting intervening details).

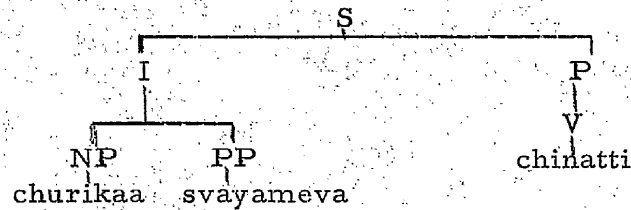
Figure XI



68. Also see II. 2. 1. 2 (sentences 10, 13).

The final form is as represented in figure XII.

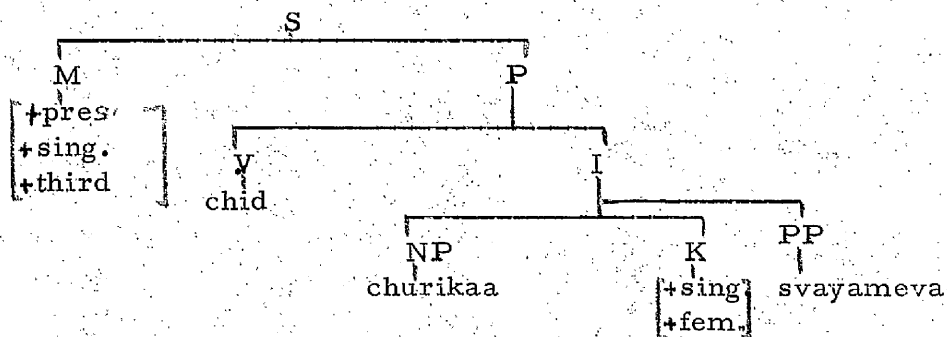
Figure XII



A PP-deletion rule deletes 'svayameva' optionally and we obtain sentence 12.

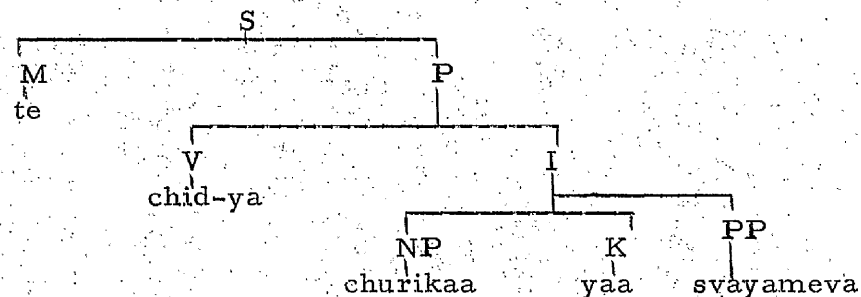
Alternatively, if the subjectivalisation-rule does not apply the process of passivisation without subjectivalisation operates and the result is as in figure XIII (from figure X).

Figure XIII



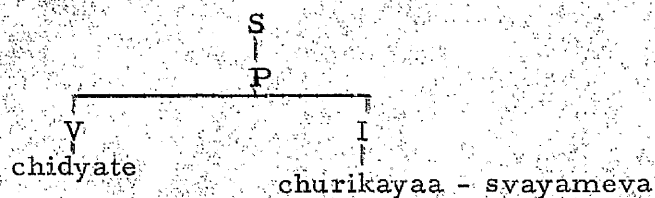
The affix-substitution rule replaces the features with affixes and the result is as in figure XIV.

Figure XIV



The final form is as in figure XV.

Figure XV



The PP deletion rule deletes 'svayameva' optionally and we obtain sentence 12.

II.3.2.2. Consider, next, sets of sentences in which the process of passivisation in relation to I, operates in various ways.

As mentioned earlier (II.1.), if there is R/O/F in a case-frame and the subjectivatisation-rule does not operate, the process of passivisation with the subjectivatisation of R/O/F takes place. But, if there is an I in the case-frame (with or without O), it is, generally, not subject to the process of passivisation with subjectivatisation (as is evident from sentences 13', 13''). However, in sentence 14'', the I is optionally selected for subjectivatisation by the process of passivisation; sentence 14' shows the usual syntactic behaviour of I, i.e. its non-subjectivatisation with the process of passivisation. In sentence 15', still another peculiarity of I is indicated, wherein the I cooccurs with an O. The process of passivisation operates, but it is I, not O (cf. II.2.1.2.) which is subjectivatised optionally (sentences 15', 15''). This characteristic of I (sets B, C below), as mentioned above, is due to its occurrence in the case-frame of a verb like 'diivyati'.

However, if a pre-verb like 'prati' is attached to 'diivyati', the process of passivisation does not select the I for subjectivatisation, rather it selects O optionally for subjectivatisation (sentences 16', 16'').

In set A, the process of passivisation does not select I for subjectivalisation (sentence 13'' is unacceptable), even if a subjectivalisation-rule does not select A for agreement with the V (sentences 13, 13').

In sets B, C the verb 'diivyati' has the case-frames [A, I-1], [A, I, O-1] respectively. In both these case-frames, the process of passivisation selects I (not O) optionally for agreement with the V (sentences 14'', 15'), in case a subjectivalisation-rule has not selected A.

In set D, the verb 'pratidiivyati' has the case-frame [A, I, O-1]. The process of passivisation selects O (and not I) for agreement with the V (sentence 16') in case a subjectivalisation-rule does not select A. ⁶⁹

A - 13. mohanah - gendukena - khelati
 A nom I i
 m. with ball - plays

(m. plays with a ball)

13'. mohanena - gendukena - khelyate
 A i I i
 by m. - with ball - is played

((it) is played with ball by m.)

13''. * mohanena - gendukah - khelyate
 A i I nom
 by m. - ball - is played

B - 14. dyutakarah - aksaan⁷⁰ - diivyati
 A nom acc
 aksaih
 I i
 gambler - dice/with dice - gambles

(a gambler plays with dice)

69. Thus, we need ad hoc features on some verbs (as well as a specification of their case-frame) if we are going to predict correctly the possibilities of passivisation.

70. A morphophonemic rule accounts for inflexional variation (acc/i) in the context of the verb 'diivyati'.

14'. dyuutakareṇa - akṣaiḥ - diivyate
 A i I i
 by gambler - with dice - is gambled

((it) is played with dice by a gambler)

14''. dyuutakareṇa - akṣaah - diivyante
 A i I nom
 by gambler - dice - are gambled

((it) is gambled with dice by a gambler)

C - 15. dyuutakarah - akṣaan - s'atasya⁷¹ - diivyati
 A nom acc O g
 akṣaiḥ
 I i
 gambler - dice/with dice - of hundred - gambles

(a gambler gambles hundred (pieces of money) with dice)

15'. dyuutakareṇa - akṣaah - s'atasya - diivyante
 A i I nom O g
 by gambler - dice - of hundred - are gambled

(hundred (pieces of money) is gambled with dice by a gambler)

15'' dyuutakareṇa - akṣaiḥ - s'atasya - diivyate
 A i I i O g
 by gambler - with dice - of hundred - is gambled

(hundred (pieces of money) is gambled with dice by a gambler)

D - 16. dyuutakarah - akṣaiḥ - s'atam⁷² - pratidiivyati
 A nom I i acc
 s'atasya
 O g
 gambler - with dice - hundred/of hundred - gambles

(a gambler gambles hundred (pieces of money) with dice)

71. A morphophonemic rule accounts for the genitive inflexional realisation of O.

72. A morphophonemic rule accounts for the optional genitive inflexion in the context of pre-verb + diivyati.

16'. dyuutakarena - akṣaiḥ - s'atam - pratidiivyate
 A i I i O nom
 by gambler - with dice - hundred - is gambled

(hundred (pieces of money) is gambled with dice by a gambler)

16''. dyuutakarena - akṣaiḥ - s'atasya - pratidiivyate
 A i I i O g
 by gambler - with dice - of hundred - is gambled

(hundred (pieces of money) is gambled with dice by a gambler)

II. 3. 3. 1. Consider, next, a set of sentences containing NP's which refer to natural forces and are specified as I.

17. sevakah - vaayunaa - diipam - s'amayati
 A I O
 servant - with wind - lamp - extinguishes

(the servant extinguishes the lamp with wind)

18. vaijñānikah - varṣaabhīḥ - s'asyam - naas'ayati
 A I O
 scientist - with rains - crop - destroys

(scientist destroys the crop with rains)

19. vaayuḥ - diipam - s'amayati
 I O
 wind - lamp - extinguishes

(wind extinguishes the lamp)

20. varṣaah - s'asyam - naas'ayanti
 I
 rains - crop - destroy

(rains destroy the crop)

21. * dandah - chaatram - s'amayati
 I R
 stick - student - quietens

(stick quietens a student)

22. * astram - s'ainikam - naas'ayati
 I R
 weapon - soldier - kills

23. guruh - dandena - chaatram - s'amayati
 A I R
 teacher - with stick - student - quietens
 (teacher quietens the student with a stick)
24. sainikah - astrena - s'atrum - naas'ayati
 A nom I i R acc
 soldier - with weapon - enemy - destroys
 (a soldier destroys the enemy with weapon)

It is apparent that the NPs 'vaayunaa' and 'varṣaabhīh' (specified as I in 17, 18) function like A in 19, 20 (cf. 'guruh' and 'sainikah' specified as A in 23, 24). It may be noted that 'dandena' and 'astrena' (specified as I in 23, 24) cannot function like A, as sentences 21, 22 are unacceptable.

It is, perhaps, proper to distinguish between 'vaayunaa' and 'varṣaabhīh' in 17, 18 from 'vaayuh' and 'varṣaah' in 19, 20.

In 17, 18 the Is occur with A. The NP 'vaayunaa' (with wind) may be either the servant's breath ('mukhasya-vaayuna') (with wind of the mouth) or the wind of a fan ('vyajanasya - vaayunaa') (with the wind of a fan).

Similarly, a scientist may create artificial rain to destroy/produce/crops as in sentence 18. Now, the problem is how to specify the NP's 'vaayuh' and 'varṣaah' in 19, 20 which are phenomena not subject to anybody's control (e.g. the 'vaayuh' in 19 could not be interpreted as the breath of someone). It has been suggested that there could be a case like 'Force'.⁷³ As Fillmore mentions, the proposed case Force can never occur in contrast with A/I.⁷⁴ One may suggest that the NP's

73. Huddleston, R., (1970), p. 504.

74. Fillmore, C.J., (1971), pp. 253-254.

referring to natural forces may be specified as either A or I. If the natural forces are specified as A, then it will have to be a type of A that cannot occur with I. But, if they are I then this characteristic need not be specifically mentioned. Secondly, if they are I, their 'event causing'⁷⁴ characteristic becomes automatically explicit. However, one may argue that they do not cooccur with A (as in 19, 20) (provided the natural forces specified as I in 17, 18 are considered distinct from those in 19, 20). But, even in such sentences (19, 20) one can conceive of some Agent after all. However, the problem of the occurrences of NP's referring to natural forces as A (in sentences like 19, 20) remains to be solved. It has been mentioned earlier (II. 3.2.1.) that there are constructions in which I functions like A i.e. a subjectivatisation-rule selects it for agreement with the V. Similarly, in the case of NP's indicating natural forces and specified as I, a subjectivatisation-rule may also apply.

III 3.3.2. Now, consider a sentence like 25 in which one could argue that the case-frame is either $[I_1, I_2 - I]$, or $[A, I - I]$.⁷⁵

25. agnih - taapena - jalam - s'osayati
 I_1 I_2 O
 fire - with heat - water - dries
 (fire dries water with its heat)

However, the NP 'agnih' (in 25), need not be specified as I in 25. Sentence 25 is derived from the structure underlying sentence 26 as the relation between 'taapena' (heat) and 'agnih' (fire) is an inalienable one.⁷⁶

75. In case one argues that the NP's indicating natural forces are A.

76. See IV. 3.2.1.1.5.

26. $\begin{matrix} \text{I} & \text{O} & \text{g} & \text{O} \\ \text{[} & \text{agnēh} & \text{-} & \text{taapah]} & \text{-} & \text{jalām} & \text{-} & \text{s'oṣayati} \end{matrix}$
 of fire - heat - water - dries
 (the heat of fire dries water)

Thus, there would be no need to specify 'agnih' (in 25) as I, as case-categories are to be specified in their underlying structures.

Fillmore suggests that the NP's indicating natural phenomena, in constructions, specified as I, may be derived from superordinate sentences.⁷⁷ There appears to be no justification for accepting this suggestion which involves treating such NP's at a level different from those NP's which do not refer to natural phenomena and are assigned the case-category I. Fillmore himself has not amplified or exemplified his suggestion. Moreover, the postulation of the case-category I in the case of NP's referring to natural forces, as in sentences 17-26 does not violate the principle of 'one-instance - [of one case-category]_{bsk}^I - per-clause'.

II. 3.4. Consider, next, sentences which contain NP's expressing emotive states.

27. $\begin{matrix} \text{A} & \text{I} & \text{i} & \text{I} & \text{ab} \\ \text{baalakāh} & \text{-} & \text{bhayēna/bhayaat} & \text{-} & \text{kampate} \end{matrix}$
 boy - with fear/from fear - trembles
 (the boy trembles with fear)
28. $\begin{matrix} \text{A} & \text{I} & \text{i} & \text{I} & \text{ab} \\ \text{saa} & \text{-} & \text{s'okena / s'okaat} & \text{-} & \text{roditi} \end{matrix}$
 she - with grief/from grief - weeps
 (she weeps out of grief)

77. Fillmore, C.J., (1971), p.254.

29. guruh - krodhena/krodhaat-chaatram - taadayati
 A I i I ab R
 teacher - with anger/from anger - student - beats
 (the teacher beats the student out of anger)
30. pitaah - snehena / snehaat - putram - aahvayati
 A I i I ab R
 father - with affection/from affection - son - calls;
 (the father calls his son with affection)
31. guruh - krodhena/krodhaat - dandena - chaatram - taadayati
 A I i I ab I i
 teacher - with anger/from anger - with stick - student - beats
 (the teacher beats the student with a stick, out of anger)

In sentence 31, there appear to be two occurrences of I.

Sentences like 31 appear to be a strong argument against postulating the principle of one occurrence of one case-category in a simplex sentence.

Three possibilities suggest themselves: (i) the first relates to the postulation of a new case-category for the NP's which express emotive states, (ii) the second is the acceptance that the NP's expressing emotive states and specified as I may cooccur with another I; (iii) the third is deriving these NP's from superordinate structures.

Of these, the first would lead to the multiplication of case-categories, thus, eventually making their postulation trivial, (ii) the second makes the 'one-instance-per-clause-principle' untenable. The third possibility suggests itself in view of sentences like 27', 28'.

- 27'. bhayam - baalakam - kampakayati
 PR A
 fear - boy - makes tremble
 (fear makes the boy tremble)
- 28'. s'okah - taam - rodayati
 PR A
 grief - her - makes weep
 (grief makes her weep).

However, sentences 29' - 31' appear to be suspect.

? 29'. krodhah - gurunaa - chaatram - taadayati
PR A R
anger - by teacher - student - makes beat

(anger makes the teacher beat the student)

? 30'. snehah - pitraa - putram - aahvayati
PR A R
affection - by father - son - makes call

(affection makes the father call his son)

? 31'. krodhah - gurunaa - dandena - chaatram - taadayati
PR A I R
anger - by teacher - with stick - student - makes beat

(anger makes the teacher beat the student with a stick)

Sentences like 27', 28' support the derivation of the NP's indicating emotive states from superordinate structures. But, sentences like 29' - 31' appear to go against this position.

II.3.5 In this subsection, NP's with i-inflexion which may be derived from underlying complex structures are considered. The problem of intentional/non-intentional interpretation of sentences containing I, is also discussed.

II.3.5.1. Consider sentences, 32-33 which appear superficially to be simplex and may be derived from the structures underlying 32'-32'', 33' - 33'' respectively.

32. pathikah - as'vena - yaati
A nom i
traveller - with horse - goes

(the traveller goes on / with a horse)

- 32'. pathikah - as'vam - aaruhya⁷⁸ - yaati
 A nom R acc V nom
 traveller - horse - having ridden - goes
 (riding a horse, the traveller goes)
- 32''. pathikah - as'vah - ca - yaatah⁷⁹
 A A
 traveller - horse - and - go
 (the traveller and the horse go)
33. baalakah - diipikayaa - yaati
 A nom i
 boy - with lamp - goes
 (the boy goes with a lamp)
- 33'. baalakah - diipikaam - aadaaya - yaati
 A nom O acc V nom
 boy - lamp - having taken - goes
 (having taken a lamp, the boy goes)
- 33''. baalakah - [diipikaayaah prakaas'e] - yaati
 A nom L O g l
 boy - of lamp in light - goes
 (the boy goes in the light of a lamp)

The NP's 'as'vena' in 32 and 'diipikayaa' in 33 cannot be specified as I. Unlike an I, the NP 'as'vena' is [+animate] and can function as an A (as in sentence 34 below). The NP 'diipikayaa' can be interpreted either as derived from a complex structure underlying sentence 33' or as a complex structure as in sentence 33''. The verb 'yaati' does not allow the occurrence of 'diipikayaa' as an I (as defined in II.3). Compare sentences 35, 35' which can be interpreted either as 33' or 33''. Sentence 35 can allow the occurrence of an I in addition to

78. The process of nominalisation is discussed in III.5 and IV.3.2.

79. For the details see V.6.1.

the occurrence of 'diipikayaa' as in sentence 35'. One may argue that in 35 ('diipikayaa - khelati: with lamp - plays) 'diipikayaa' may be an I, but in that case it would be interpreted as a toy.

34. as'vah - yaati

A

horse - goes

35. baalakah - diipikayaa - { khelati : plays
A nom i { likhati : writes
boy - with lamp khaadati : eats }

35'. baalakah - kalamena - diipikayaa - likhati
A nom I i i
with pen - with lamp - writes
- kriidanakena - diipikayaa - khelati
I i i
with toy - with lamp - plays
- camasena - diipikayaa - khaadati
I i i
with spoon - with lamp - eats

In sentences 32', 33' the items specified as V⁸⁰ Nom and the item 'prakaas'e' in 33'' are deleted optionally by later rules and the NP's 'diipikaam' and 'diipikaayaah' (in sentences 33', 33'' respectively) and 'as'vam' (in sentence 32') realise as 'diipikayaa' and 'as'vena' respectively (i.e. with i-inflexion). Sentences 32, 33 have the underlying structures as represented in figures XVI - XVIII and XVIII - XIX respectively.

80. The process of Nominalisation allows deletion of V Nom by a later rule.

Figure XVI

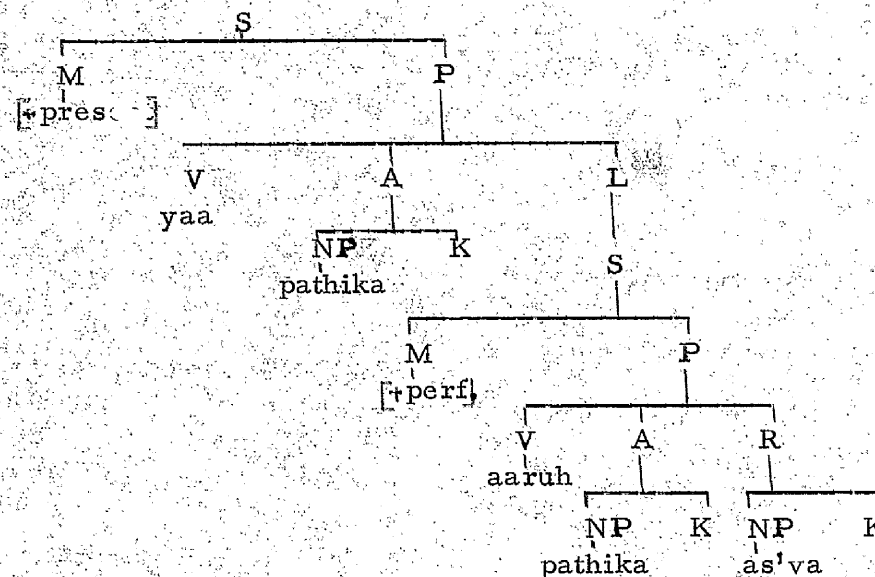


Figure XVII

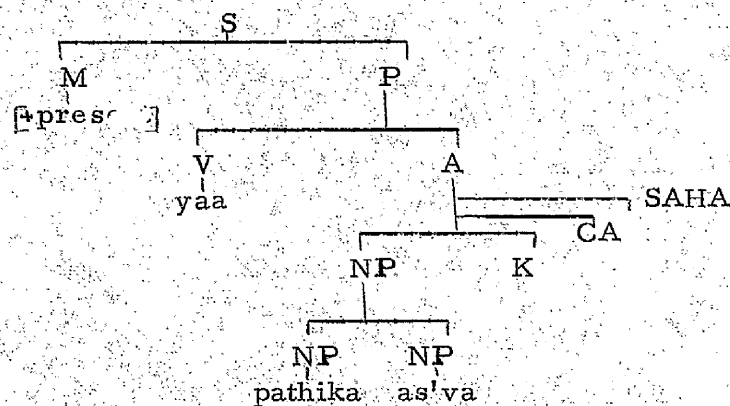


Figure XVIII

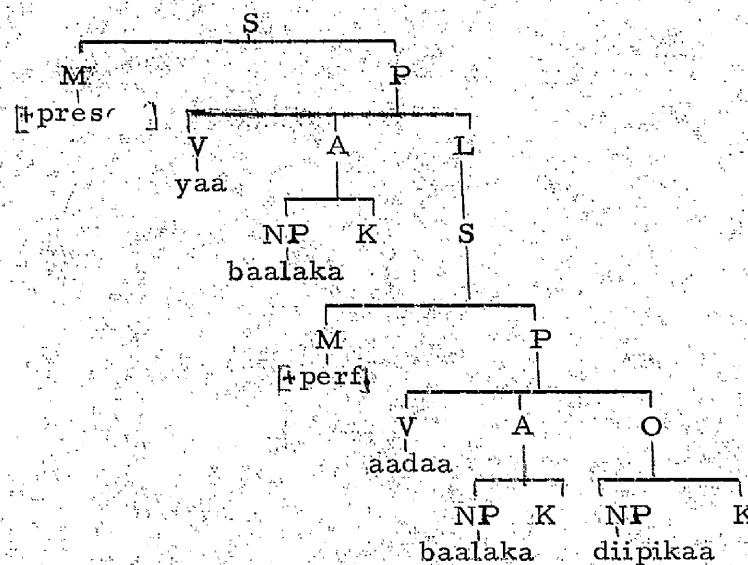
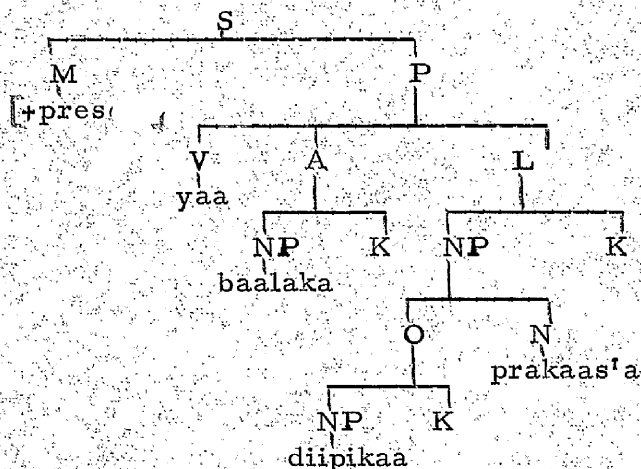


Figure XIX

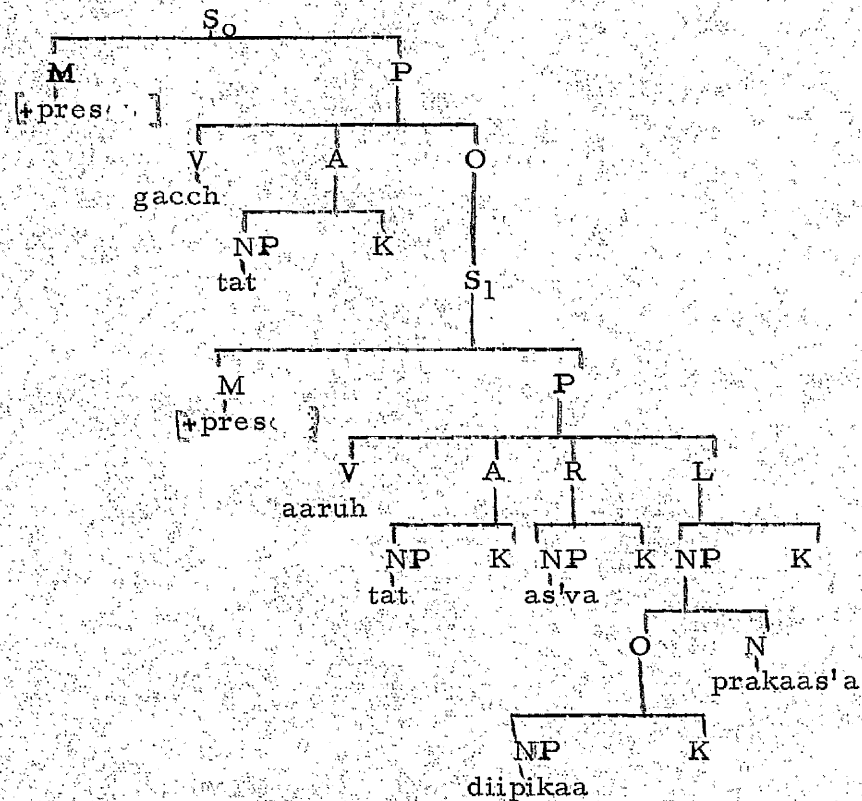


Thus, in a sentence like 36 the NP's 'as'vena', 'diipikayaa' (as in sentences 32, 33) cannot be specified as I. A sentence like 36⁸¹ is derived from structures underlying sentence 36^t (as represented in figures XX, XXI).

36. sa - as'vena - pathaa - diipikayaa - gacchati
 A i i i
 he - by horse - by road - by lamp - goes
 (he goes with a lamp on a horse along the road).

81. cf. Singh, J.D., (1970), p.29: he mentions that according to the commentator Naagojibhatta 'there are three 'karana-kaaraka' (INSTRUMENTAL) 'relations' in a sentence like 36. Even accepting Naagojibhatta's definition of 'karana' it is not clear how 'pathaa' can indicate 'karana-kaaraka'. Secondly, commentators have not taken into account ambiguous interpretation of 'as'vena' and 'diipikayaa' (sentence 36^t). Thirdly, if 'karana' is defined as 'the most serviceable in the accomplishment of an act' (Roy, S., p.36: Paanini's rule I.4.42), it is unclear how three actants can be 'most serviceable' simultaneously in relation to one action.

Figure XXI



II.3.5.2. Consider, next, sentences 37, 38 the English equivalents of which have been considered to be derived from the same underlying structure.⁸⁴

37. sa - churikayaa - phalam - khandayati
 A I O
 he - with knife - fruit - cuts
 (he cuts fruit with a knife)

38. sa - phalam - khandayitum - churikaam - prayunkte
 A O VNom O
 he - fruit - to cut - knife - uses
 (he uses a knife to cut fruit)

Lakoff, while advocating an identical underlying structure for the above sentences, refers to its justification in the form of the

84. Lakoff, G., (1968), pp.4-29.

postulation of a significant grammatical generalisation on the basis of conditions of selection and co-occurrence, which now require to be stated only once in the description. Chomsky⁸⁵ has considered different examples to show that Lakoff's position is not tenable. In the first instance, Lakoff considers that a sentence with an instrumental adverbial phrase and a sentence containing a verb form like 'prayuNkte' (uses) are synonymous. But, this claim appears doubtful in Sanskrit as in English. Consider sentences 39, 40.

39. aakhetakah - pas'um - hantum - baanam - prayuNkte
 A R VNom O
 hunter - animal - to kill - arrow - uses

(the hunter uses an arrow to kill the animal)

40. aakhetakah - pas'um - baanena - hanti
 A R I
 hunter - animal - with arrow - kills

(the hunter kills the animal with an arrow)

Now, at least with one interpretation, the above sentences are not synonymous. In case the tense in sentences 39, 40 is interpreted as simultaneous with the point of reference (i. e. speaking), sentence 40 refers to the operation of killing, but sentence 39 refers to the operation prior to killing. Besides, sentences 39, 40 are not synonymous on another count also. Sentence 39 can have a continuation like 39', but sentence 40 cannot be continued like 40'.

- 39'. aakhetakah - pas'um - hantum - baanam - prayunkte
 hunter - animal - to kill - arrow - uses

parantu - sa - palaayate
 but - that(animal) - escapes

(the hunter uses the arrow to kill the animal but that animal escapes)

85. Chomsky, N., (1969), pp. 12-14, p. 43 (f. n. 16), cf. Kooij, J. G. (1971), pp. 72-79.

40'. * aakhetakah - pas'um - baanena - hanti - parantu -
 hunter - animal - with arrow - kills - but

sa - palaayate
 that - escapes

(the hunter kills the animal with an arrow, but that animal escapes).

Thus, Lakoff's proposition that sentences 39, 40 have the same underlying structure and are synonymous does not appear to be convincing. Besides, sentences 41 and 42 show that if Lakoff's suggestion is accepted then the I in 41, 42 would come from another structure (superordinate/~~and~~ embedded) but the L would not. There appears to be no justification, except the paraphrase with use, for postulating this differentiation between the I and the L.

41. (i) chaatrah - kalamena - patre - likhati
 A I L
 student - with pen - on paper - writes
 (the student writes on paper with a pen)

(ii) saa - darvyaa - paatre - dugdham - nidadhaati
 A I L O
 she - with ladle - in pot - milk - puts
 (she puts milk in a pot with a ladle)

42. (i) chaatrah - kalamam - patre - lekhitum - prayuNkte
 A O L VNom
 student - pen - on paper - to write - uses
 (the student uses the pen for writing on paper)

(ii) saa - darviim - paatre - dugdham - nidadhaatum -
 A O L O VNom
 she - ladle - in pot - milk - to put -
 prayuNkte
 uses

(she uses the ladle for putting milk in the pot)

If it is proposed that the L in 41, 42 also comes from super-ordinate (or embedded) structure (like I in 41, 42), then we will have

sentence 43(i) and 43(ii) in place of sentence 42(i) and (ii) and sentence 41 and 43 would not have similar interpretation. Consequently Lakoff's position would be weakened further.

43. (i) chaatraḥ - kalamam - patram - ca - lekhitum -
 O O
 student - pen - paper - and - to write -
 prayankte
 uses

(the student uses a pen and paper for writing)

- (ii) saa - darviim - paatram - ca - dugdham - nidadhaatum
 O O O
 she - ladle - pot - and - milk - to put
 prayankte
 uses

(she uses ladle and pot for putting milk)

Thus, it appears difficult to accept Lakoff's position in relation to the case-category I.

II. 3. 5. 3. Now, it has been argued that the instrument of an argument may be used with an intentional or a non-intentional interpretation. An argument assigned the case-category I(nstrumental) may have 'purposive' or 'accidental' sense.⁸⁶ A sentence like 44 is ambiguous. The purpose sense is indicated if sentence 44 is continued like 44'. The accidental sense is expressed if 44 is continued as 44".

44. sa - vetrena - caṣakam - abhanak
 I O
 he - with a stick - cup - broke
 (he broke the cup with a stick)

86. Lakoff, G., (1968).

- 44'. sa - anaayaasena - vetrena - caṣakam - abhanak
 he - with effortlessness - with stick - cup - broke

(he broke the glass easily with a stick)

- 44". sa - anavadhaanena - vetrena - caṣakam - abhanak
 he - with carelessness - with stick - glass - broke

(he broke the glass with a stick carelessly)

Lakoff gives a number of 'grammatical contexts'⁸⁷ where the 'accidental' interpretation of a sentence is ruled out. He, then, proposes that "if there are grammatical contexts in which one sense but not the other can appear, then it must be assumed that, two different deep-structures are involved."⁸⁷ However, he does not propose an underlying -structure for the accidental interpretation.⁸⁹ But, the question remains whether the difference between the accidental and purpose interpretation of a sentence like 44 is indeed a reflection of two underlying structures. Consider sentences 45, 46. In sentence 45, the hand is cut by a knife whether it happened accidentally or was done purposely. Thus, the instrumentality of knife is not affected by this ambiguity. Besides, the ambiguity remains even in sentence 45 wherein no overt I occurs.

45. sa - churikayaa - hastam - alunaat
 I O
 he - with knife - hand - cut

(he cut his hand with a knife)

46. sa - hastam - alunaat
 O
 he - hand - cut

(he cut his hand)

Thus, the intentional/non-intentional or purposive/accidental interpretation of I seems irrelevant to the definition of I.

87. Lakoff, G., (1968), pp. 8-9: he gives eight such contexts.

89. Lakoff, G., (1968), p. 8. 'I am interested in this paper only in the purposive instrumental sense, not in the accidental sense.'

II. 4 In this section the case-categories L(ocative), SO(urce), GO(al), Ext(ent) and Pa(th) with spatio-temporal orientation⁹⁰ are discussed. The discussion starts with a reference to the Sanskrit grammarians and is followed by that of the views of contemporary linguists.

II. 4. 1. The Sanskrit grammarians in their discussion of 'kaaraka' - relations, have referred to what can be comprehended under L and SO.⁹¹ They have not discussed 'time' ('kaala') as a 'kaaraka'-relation⁹² separately. But, they have definitely taken note of spatio-temporal distinction and in some of the rules the terms denoting time and space,

90. The case-categories SO, GO have a wider scope which is discussed in II. 4. 5 and II. 4. 6 respectively.

91. Roy, S., (1920), pp. 57, 92: Paanini's rules: 'dhruvam - apaaye - apaadaanam' (I. 4. 24), 'aadhaarah - adhi kara nam' (I. 4. 45).
cf. Vasu, S. C., (1891a), pp. 177, 184: Paanini's rule I. 4. 24: "a noun whose relation to an action is that of a relatively_{bsk}^I fixed point from which departure takes place is called 'apaadaana'." Paanini's rule I. 4. 45: "that which is related to the action as the site where the action is performed by reason of the agent or the object being in that place is called 'adhikarana' or location."

92. cf. Subramania Iyer, K. A., (1969), pp. 322-24, the section on 'the abode ('adhikarana')'.
However, in Paanini's rule II. 3. 64 'krtvorthaprayoge - kaale - adhikarane', the word 'kaale' (temporal) modifies 'adhikarane'. But, it is not a rule treating temporal location in general. One may argue that Paanini's rule like I. 4. 45 (f. n. 91) includes temporal location as well. But the commentators do not give any instance, under that rule, with temporal location.
cf. Roy, S., (1920); Vasu, S. C., (1891a), Bhattojidiikṣita.

occur together.⁹³

II.4.2. The case-categories mentioned above have been referred to as the 'local' functions of the category of case,⁹⁴ which include 'temporal as well as spatial distinctions'.⁹⁴ This is the reason for their being considered as 'concrete' case-distinctions as opposed to others which are called 'grammatical' or 'abstract'.⁹⁵ Some linguists have

93. Roy, S., (1920): Vaarttika on Paanini's rule I.4.31: "yatah ca - adhvakaalanirmaanam - tatra - pañcamii - , tadyuktaat - adhvanah - prathamaasaptamyav, - kaalaat - saptamii - ca - vaacyaa": the starting point in the measurement of the length of time and space takes 'pañcamii'; the space measured takes 'prathamaa' and 'saptamii', and the time takes 'pañcamii' (pp.62-63).
Paanini's rule II.3.5: "kaalaadhvanoh - atyantasamyoge - dvitiiyaa": time and stage of journey take "dvitiiyaa" when pervasion I i. e. continuity or extension_{bsk} I is implied" (p.35).
Paanini's rule II.3.6. 'apavarge-tritiiyaa' : if "attainment of the end ... has to be indicated time and stage of journey take 'tritiiyaa' when there is pervasion" I i. e. continuity or extension I_{bsk} as well (pp.38-39).
cf. Subrahmanya Sastri, P.S., (1957a), pp.116-117: Vaarttika on Paanini's rule I.4.51: "kaalabhaavaadhvagentavyaah - karmasamjñaa - hyakarmānaam": time, duration and the distance to be travelled take 'karmasamjñaa' with reference to 'akarmakadhaatu': time - 'maasam-aaste / svapiti' [he stays / sleeps for a month_{bsk} I, duration ; 'godoham-aaste/svapiti' (he stays/sleeps) during the time of milking), 'kros'am - aaste/svapiti' (he stays/sleeps for two miles). Also see rule II.3.7: "saptamiipañcamyau - kaaraka madhye".
94. Lyons, J., (1968), p.298.
95. Lyons, J., (1968), pp.295, 299.

recognised a general distinction of 'locative vs. directional' as "a particular manifestation of a more general distinction between static and dynamic"⁹⁶ (i. e. in/at vs. to/from). This distinction will not be considered independently with reference to the above-mentioned case-categories in this analysis. It is indicated (f. n. 90) that the case-categories SO, GO are not related to the spatio-temporal axes only (see II. 4.5 and II. 4.6). There have also been attempts to interpret the case-categories in terms of a localistic approach.⁹⁷ Fillmore⁹⁸ refers to one case-category locative and assigns the distinctions like the one between 'in London/to London' to associated verbs. This treatment can, at least, be considered sketchy. However, in a recent paper,⁹⁹ he has discussed this case-category afresh and has postulated in its place the case-categories Place, Time, Source and Goal. Following Bennett¹⁰⁰ he suggests the case-category Pa(th) also.¹⁰¹ Lehiste has mentioned a case-category like Terminative,¹⁰² which corresponds to Ext(ent)¹⁰³ proposed here, as the latter term

96. Lyons, J., (1968), p. 300.
cf. Bennett, D.C., (1970), pp. 28ff.

97. e.g. Anderson, J.M., (1971).

98. Fillmore, C.J., (1968a), pp. 25-26.

99. Fillmore, C.J., (1971), pp. 251, 258-61: he mentions 'Place, Time' (p. 251) and then changes over to 'Location, Time' (p. 258).

100. Bennett, D.C. (1970), p. 2; also in Semiotica V-1 (1972), p. 59.

101. Fillmore, C.J., (1971), p. 259.

102. Lehiste, I., (1969), p. 334.

103. Bennett also suggests Ext.

seems more appropriate.

II.4.3. The distinction between case-categories Place/Location and Time is not retained, henceforth. There is more than one reason for this. In the first instance, if the distinction is to be maintained uniformly then this would apply to SO, GO and Ext as well and thus the number of case-categories would multiply, as in sentences 1-4 the case-categories would have to be specified as place SO/GO, time SO/GO, place Ext, time Ext, without any consequent advantage in description. There appears to be no significant syntactic evidence to justify this distinction despite the obligatory occurrence of spatial/temporal Locative or Ext with particular verbs. Because such verbs allow temporal/spatial Locative also in their case-frames, in addition to obligatory spatial/temporal Locative or Ext, as in sentences 5, 6.

1. yaatrikah - madhyaahnaat - [saayam yaavat] - abhramat
 A SO GO
 traveller - from midday - evening till - wandered
 (the traveller wandered from midday till evening)
2. mantrii - landananagaraat - rediNaganagaram - ayaat
 A SO GO
 minister - from city of London - to city of Reading - went
 (from London, the minister went to Reading)
3. chaatrah - dinam - apathat
 A Ext
 student - day-long - read
 (the student read day-long)
4. sevakah - kros'am - ayaat
 A Ext
 servant - two miles - went
 (the servant went for two miles)

5. sa - saaikilam - aNgane - (saayam) - nyasyati
 A O L L
 he - bicycle - in yard - (in evening) - keeps
 (he keeps the bicycle in the yard (in the evening))
6. (nagare) - melaa - maasam - sthaasyati
 L O Ext
 (in town) - fair - month-long - will stay
 (the fair will last for one month (in the town))

Secondly, Fillmore's acceptance of this distinction between place and time is motivated by his "one-instance of one case-category_{bsk}^I - per - clause principle."¹⁰⁴ In a sentence like 7 there could be occurrences of both place and time.

7. guruh - sandhyaayaam - vidyaalaye - aaste
 D L (time) L (place)
 teacher - in evening - in school - stays
 (the teacher stays in the school in the evening)

However, this could be considered as an idiosyncratic aspect of the case-categories discussed in this subsection (II.4). There are some other characteristics of L (place in Fillmore's sense) and Pa(th) which are peculiar to them (see II.4.4, II.4.8), but on the basis of these no further specification of case-categories has been proposed. Thus, it does not appear unreasonable to ignore this occurrence of both place and time (which is specific to L, SO, GO) in a simplex sentence.¹⁰⁵

104. Fillmore, C.J., (1971), p.248.

105. It may be argued that as no verb can have both L (time) and L (space) as obligatory parts of its case-frames, one or the other may be considered as part of a superordinate structure. But, this would involve treatment of complex structures and as such is not incorporated in this analysis.

Now, if the three occurrences of L in sentence 8 above are not interpreted as one embedded within the other the sentence would be unacceptable.

Similarly, in a sentence like 10 all the three occurrences of temporal reference function as one contained within the other.

10. adya -raatrau - das'avaadanasaṁmaye - kolaahalaḥ - ajaayata
L L L O
today - at night - at ten hour time - noise - became pro-
duced.
(there was noise at ten at night today)

But, on a sentence like 11, the two occurrences of temporal references must be interpreted as an instance of Coordination. The occurrence of 'ca' in sentence 11 indicates Coordination. 108

11. baalikaā - pratyūṣe - sandhyāyāam - ca - bhramati
A L L
girl - in dawn - in evening - and - walks
(the girl walks at the dawn and in the evening)

II.4.4.1. Now consider sentences 12 (a-c) in which L is a complex structure.

- 12(a) [gehaat - dakṣiṇaa / dakṣiṇaahi / samiipam] - gauḥ - carati
 L O ab A
 from house - south / south / near - cow - grazes
- (b) [gehasya - dakṣiṇena / dakṣiṇataḥ / samiipam] - gauḥ - carati
 L O g
 of house - south / south / near - cow - grazes
- (c) [geham - dakṣiṇena / sa mayaa / nikaṣaa] - gauḥ - carati
 L O acc - south / near / near - cow - grazes
- three = (the cow grazes near/south of the house)

In the sentences (12a-c), like sentence 8 above, L has a complex structure and is to be interpreted in accordance with a rule-

108. See V.5.1 for details on Coordination.

15. raajn'ii - raajabhavane - vasati
 A nom L 1
 queen - in palace - lives
- 15'. raajn'ii - raajabhavanam - upa- vasati
 A nom L acc aa-
 anu-
 adhi-
 queen - in palace - lives
- both = (the queen lives in the palace)

As mentioned above, it may be noted that the difference in inflexional realisation is conditioned both by the lexical items themselves and the features on the lexical entry of the item concerned. Thus, sentences like 14'' which contains a verb 'asyati' (places) (which is other than the one mentioned in sentence 14) with the pre-verb 'adhi' (as in sentence 14 above), and 15'' which has a verb 'vasati' (as in 15 above) but with the pre-verbs 'ni' and 'prati' (other than those in sentence 15 above), do not show variation in surface-realisation of L. Sentences 14''', 15''' are unacceptable.

- 14''. maataa - baalakam - s'ayane - adhyasyati
 A R L 1
 mother - boy - in bed - places
 (the mother places the boy in bed)
- 14'''.* maataa - baalakam - s'ayanam - adhyasyati
 A R L acc
 mother - boy - in bed - places
- 15''. raajn'ii - raajabhavane - ni - vasati
 A L 1 prati -
 queen - in palace - lives
 (the queen lives in the palace)
- 15'''.* raajn'ii - raajabhavanam - ni - vasati
 A L acc prati -
 queen - in palace - lives

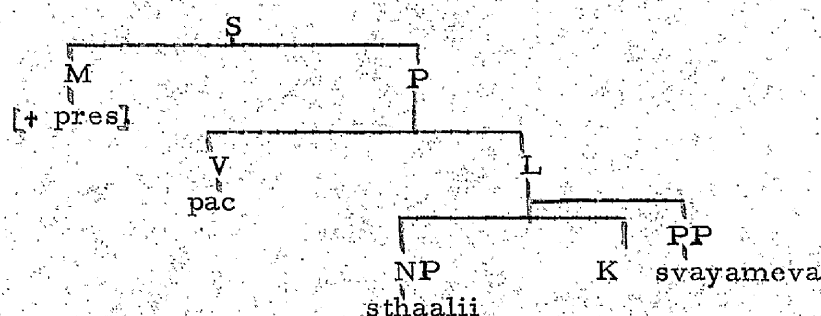
II. 4. 4. 3. It has been mentioned earlier (II. 1. 1.) that the subjectivalisation-rule normally selects A/D for agreement with the V.

But, consider a sentence like 16 wherein L, the only case-category in the frame, is selected for subjectivalisation.

16. sthaalii - (svayameva) - pacati¹¹¹
 L nom
 pot - (itself) - cooks
 (pot cooks by itself)

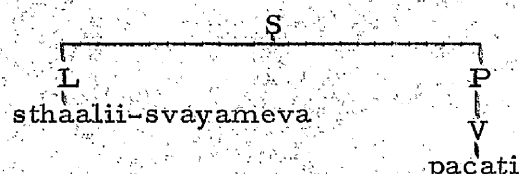
Sentence 16 has the underlying structure as in figure II.

Figure II



The process applied to sentences 10, 13, 16, 19 (in II. 2. 1. 2.) operates and the final form (omitting intervening details) is as represented in figure III.

Figure III



111. The verb 'pacati' has also a case-frame like [A, O, L -] as exemplified by a sentence like
 'suudah - sthaalyaam - bhaktam - pacati.'
 A L
 cook - in pot - boiled rice - cooks

A rule deletes 'svayameva' optionally.

It may be noted that in constructions like 16 above, if any other case-category co-occurs, L can never be selected for subjectivalisation (16' below is unacceptable). A sentence like 16 conveys the sense of ease or effortlessness.

- 16'. * sthaalii - odanam - pacati
 L O
 pot - boiled rice - cooks

II.4.5. The case-category SO(urce) is considered as the 'starting point'¹¹² of an action or process. The case-category SO may be assigned to entities which are animate or inanimate. Consider sentences 17-23.

17. sa - landananagaraat - ayaat
 A SO ab
 he - from city of London - went
 (he went from the city of London)
18. vihagah - gulmaat - dayate
 A SO ab
 bird - from bush - flies
 (a bird flies from the bush)
19. nadii - himaalayaat - prabhavati
 A SO ab
 river - from Himalayas - appears (rises)
 (the river rises in the Himalayas)
20. chaatrah - guroh - bhaasikiim - adhiite
 A SO ab O acc
 student - from teacher - linguistics - learns
 (the student learns linguistics from the teacher)

112.. Fillmore, C.J. ? (1971), p.259: his previous definition 'the place to which something is directed' ((1969) p.116) does not appear appropriate. In the first instance, 'place' makes it limited in its scope, and secondly '... to which something is directed' appears to refer to GO rather than to SO.

21. raamah - jyesthamaatuh - ajaayata
 D nom SO ab
 r. - from eldest mother - became born

(r. was born from the eldest mother)

- 21'. raamah - jyesthamaatari - ajaayata
 D SO 1
 r. - in eldest mother - became born

(r. was born from the eldest mother)

22. raamah - das'arathaat - ajaayata
 D SO ab
 r. - from d. - became born

(r. was born from d. (i.e. father))

- 22'. * raamah - das'arathe - ajaayata
 D SO 1
 r. - in d. - became born

[Sentence 22, but not 22', is acceptable. The acceptability of sentence 21' as opposed to 22', perhaps, relates to the knowledge of world i.e. mother, not father, bears the child in her womb.]

23. adyatah - avakaas'ah - asti
 SO Es
 from today - holiday - is

(there is holiday from today).

The case-category SO, as indicated earlier (II.4.2.) need not refer to temporal and spatial entities only. In sentences 20-22 the case-category SO does not refer to time or place.

The case-category SO is distinguished from A/D/Es/R/O/F/I. It is distinct from A/D/Es/O as it can never be subjectivalised. Secondly, SO presupposes the occurrence of A/D/Es/O in the case-frame as in the sentences above. In certain constructions O, I (sentences 10, 13, 16, 19, II.2.1.2.) and L as well (II.4.3.3.) can be selected for subjectivalisation, but SO can never be. SO is distinguished from R/O/F/GO also in respect of the operation of the process of passivisation as this process never applies to SO.

II. 4. 5. 1. The case-category SO which occurs in sentences 17-23, characterises the entity from which an action/process which has been initiated by another actant (i. e. A/D and in certain constructions Es/O), emanates. But, there are constructions like 24-28 where this definition does not help and the unspecified NP poses a problem for case-specification.

24. baalikaa - simhaat - bibheti
 D nom ab
 girl - from lion - fears
 (the girl fears from the lion)
25. snuṣaa - s'vas'uraat - jihreti
 A nom ab
 daughter-in-law - from father-in-law - feels shy
 (the daughter-in-law feels shy of her father-in-law)
26. muuṣah - otoh - niliiyate
 A nom ab
 mouse - from cat - hides
 (the mouse hides itself from cat)
27. ambaa - putram - agneh - niṣedhati
 A nom R acc ab
 mother - son - from fire - checks
 (the mother keeps her son from fire)
28. kṛṣakah - gaam - s'asyebhyah - vaarayati
 A nom R acc ab
 farmer - cow - from crops - checks
 (the farmer keeps the cow from the crops)

There appears to be three ways for specification of the NP which has not been assigned a case-category in sentences 24-28 above.

(i) SO as the starting point or point of departure for an action/process (as in sentences 24-28) may be considered more abstract and the NP (in 24-28) is specified as SO; (ii) the NP not specified as a case in sentences 24-28 above may be explicated in terms of morphological

features only (i.e. the ablative inflexion may account (for a case-category or none at all) in the context of the verb concerned);

(iii) sentences 24-28 may be derived from complex underlying structures.

The first option implies not only extraction of common semantic elements of verbs, but also abstraction of these common semantic elements at a level which may become uninteresting ultimately¹¹³ (see II.4.5.2.

also); and as such is not followed in this analysis. The third option has

been followed by Sanskrit grammarians¹¹⁴ in the case of sentences like

25, which could be derived from a structure underlying a complex sentence like 25'.

25'. snuṣaa - s'vas'uram - dr̥stvaa¹¹⁵ - jihreti
 A nom R acc VNom
 daughter-in-law father-in-law - having seen - feels shy
 (having seen her father-in-law, the daughter-in-law feels shy)

But, it is not clear how sentence 24 is different¹¹⁶ from 25 and thus

113. cf. Subrahmanya Sastri, P.S., (1957), pp.92-98: he refers to Patañjali's views assigning the 'apaadaana-kaaraka' (comparable to SO) to the unspecified NP's in the above sentences, which do not appear convincing and reduce the different lexical items to a point where nothing is left of their characteristics as individual lexical items.

114. Roy, S., (1920), p.62: Vaartika on Paanini's rule I.4.31.

115. cf. Roy, S., (1920), p.62: the Sanskrit grammarians would like to assign obligatorily a pre-verb to V Nom in 25' which would lead to some morphological variation (i.e. 'samdr̥s'ya' in place of 'dr̥stvaa'), which involves no change in the meaning. But, it is difficult to see any syntactic or semantic justification for the position of the Sanskrit grammarians.

116. The Sanskrit grammarians have not proposed a derivation comparable to that of 25, in the case of sentence 24.

justifies a derivation which is different from that of sentence 25 (assuming that the derivation of 25 is correct). But, there appears to be lack of syntactic justification to derive sentences 24-28 from structures underlying complex sentences. Sentences 27, 28 could be related to sentences 27', 28' wherein the unspecified NP is complex in structure, but the problem of case-specification remains as it is.

27'. ambāa - putram - agneh - samiipaat - nisedhati
 A R O g ab
 mother - son - of fire - from proximity - checks
 (the mother keeps her son from the proximity of fire)

28'. kṛṣakah - gaam - s'asyaanaam - samiipaat - vaarayati
 A R O g ab
 farmer - cow - of crops - proximity - checks
 (the farmer keeps the cow from the proximity of crops)

The second option mentioned above, amounts to the acceptance of the inadequacy of the case-notion for certain constructions. In other words, the case-category SO is assigned to the unspecified NP's in sentences 24-28 on the basis of the ablative inflexion in relation to the verbs. Or, alternatively, no case-category is specified, the NP's are explicated with reference to the ablative-inflexion conditioned by the verbs concerned.

However, consider sentences 29, 30 which appear to come from structures underlying complex-sentences like 29', 30'.

29. yuvatī - landanāṭaavaraat - baalakam - pas'yati
 D nom ab R acc
 young lady - from London - tower - boy - sees
 (the young lady looks at the boy from the London-tower)

29'. yuvatī - landanāṭaavare - sthitvā - baalakam - pas'yati
 D L I V Nom R
 young lady - in London-tower - staying - boy - sees
 (the young lady, staying in the London-tower, looks at the boy)

30. guruh - aasanaat - s'isyaan - upadis'ati
 A ab R
 teacher - from seat - pupils - preaches
 (the teacher, from his seat, preaches to the pupils).
- 30'. guruh - aasane - sthitvaa - s'isyaan - upadis'ati
 A L 1 V_{Nom} R
 teacher - in seat - having stayed - pupils - preaches
 (the teacher staying in his seat, preaches to the pupils)

There are reasons to derive 29, 30 from the structures underlying sentences 29', 30' respectively. In the first instance, the NP's with ablative inflexion (i. e. 'landana-ṭaavaraat' and 'aasanaat' in 29, 30 respectively) limit the locational reference to 'yuvatii' and 'guruh' in 29, 30 respectively (cf. sentence 29'' wherein the NP 'landana-ṭaavare' may be related to both 'yuvatii' and 'baalakam', and sentence 29''' which is unacceptable); and, thus, will be derived from 'landana-ṭaavare sthitvaa' and 'aasane sthitvaa' respectively (in sentences 29', 30').

- 29''. yuvatii - landanaṭaavare - baalakam - pas'yati
 D L 1 R
 young lady - in London-tower - boy - sees
 (the young lady looks at the boy in the London-tower)
- 29'''. * yuvatii - landanaṭaavaraat - baalakam landanaṭaavare -
 D ab R acc L 1
 young lady - from London-tower - boy - in London-tower
 sthitam - pas'yati
 V_{Nom}
 staying - sees
 (from the London-tower, the young lady looks at the boy staying
 in the London-tower)

Secondly, consider sentences like 30'', 30'''. If sentence 30'' is interpreted like sentence 30''', the NP's 'aasane'₁ and 'aasane'₂ (in sentence 30'') cannot be co-referential. It indicates that the NP 'aasanaat' (in sentences 30''', 30) could only come from a structure

underlying 'aasane - sthitvaa' (in sentences 30', 30'').

30''. guruh - aasane₁ - sthitvaa - s'isyaan - aasane₂ -
 A L l V_{Nom} R L
 teacher - in seat - having stayed - pupils - in seat -

 sthitaan - upadis'ati
 V_{Nom}
 staying - preaches

 (staying in his seat the teacher preaches to his pupils staying
 in the seat)

30'''. guruh - aasanaat - s'isyaan - aasane - sthitaan - upadis'ati
 A ab R L l V_{Nom}
 teacher - from seat - pupils - in seat - staying - preaches

 (from his seat the teacher preaches to the pupils staying in
 the seat)

The above treatment of sentences 29, 30 raises the problem of the postulation of some form of abstract verb in place of the V_{Nom} in sentences 29' - 30', and though there are severe restrictions with regard to items that can occur as V_{Nom} in such constructions, the justification for the postulation of one or the other V_{Nom} is not clear at present. However, with this treatment of sentences like 29-30, assigning the case-category SO to the NP's unspecified in sentences 29-30, is not needed. ¹¹⁷

II.4.5.2. Now, consider a sentence like 31, which contains a SO with complex-structure (cf. SO in 17-23).

117. The case-categories are specified with reference to the underlying structures of sentences. Assuming that sentences 29-30 are derived from structures underlying 29'30' there is no need to specify case-category SO in 29-30.

31. [gehaat / gehasya - antikaat] - sevakah - yaati
 SO O ab O g ab A nom
 from house/ of house - from near - servant - goes
 (the servant goes from near the house)

The complex-structure of SO is to be interpreted in terms of the rule-schema $NP \rightarrow N(O)$ indicating, thereby, the inalienable relationship between N and O.¹¹⁸

Consider, next, sentences 32, 33 below and 20 above in which one might argue for the equation of SO with A.

32. mohanah - raamaat - pustakam - kriinaati
 A nom SO ab O acc
 m. - from r. - book - buys
 (m. buys a book from r.)

33. putrah - pituh - patram - grhnaati
 A SO ab O acc
 son - from father - letter - takes
 (the son takes a letter from his father)

There are, however, reasons for not accepting such an analysis. In the first instance, it has been mentioned (II. 4.5) that there is need to distinguish SO from A because of the reasons given therein. Secondly, such an analysis presupposes a componential treatment of verbs like 'adhiite' (learns), 'kriinaati' (buys), 'grhnaati' (takes) (in sentences 20, 32, 33) and simultaneously takes into consideration verbs like 'adhyapaayati' (teaches), 'vikriinaati' (sells), 'dadaati' (gives) respectively.¹¹⁹ But, in this analysis, a verbal form is taken as one complete lexical unit (no componential analysis is taken

118. cf. IV. 3.2.1.1.7.

119. Anderson, J.M., (1971).

into account) and case-categories are specified with reference to this verbal form, i. e. without taking into consideration any other verbal form related or otherwise. Thirdly, in a broader sense, A(gentive), in any case-frame, could be substituted with SO, or SO with A (if SO refers to entities which are **I + animate** 1, as A is the initiator of the action denoted by the verb; though this is possible only when other verbal forms are taken into consideration. But, this substitution (of A with SO or vice-versa) does not appear to be appropriate. One distinction between A and SO (in case both refer to entities which are **I + animate**) as in 20, 32, 33) lies in the fact that A is the initiator of the action/process but SO is not (with reference to a particular verb) and this is why in such constructions SO presupposes the occurrence of A in the case-frame. If SO in sentences 20, 32, 33 is re-specified as A, this significant distinction between A and SO is missed. Fourthly, the verbs 'adhyapayati' (teaches) and 'dadaati' (gives) do not always imply verbs like 'adhiite' (sentence 20), and 'grhnaati' (sentence 33). Thus sentences 34, 35 are possible.

34. guruh - s'isyaṃ - adhyaapayati - parantu - sa - no - adhiite
A R A
teacher - student - teaches - but - he - not - learns
(the teacher teaches the student but he does not learn)
35. raamah - mohansya - pustakam - dadaati - parantu - sa -
A GO O A
r. - of m. - book - gives - but - he
no - grhnaati
not - takes
(r. gives a book to m. but he does not take)

It is possible that a teacher may not teach a student and yet he may learn from the teacher by overhearing him. I suspect that even in the case of 'kriīnaati - vikriīnaati' (buy - sell), it is not always that whenever x sells to y, y buys it.

II.4.6. The case-category GO has been referred to as 'the destination'.¹²⁰ Fillmore would like to assign this case-category to an entity without any specification of animacy. In sentences 36-40 the case-category GO cooccurs with A.

36. sa - nagaram / nagaraaya - yaati
A GO acc GO d
he - to town / for town - goes

(he goes to the town)

37. mohanah - raame - pustakam - vikriinaati
A GO l O
m. - in r. - book - sells

(m. sells a book to r.)

38. sa - priyaayaam - patram - presayati
A GO l O
he - in beloved - letter - sends

(he sends a letter to his beloved)

39. pitaa - putraaya - pustakam - dadaati
A GO d O
father - to son - book - gives

(father gives a book to his son)

40. guruh - chaatrebhyah / chaatreṣu - pustakaani - vitarati
A GO d GO l O
teacher - for students / in students - books - distributes

(the teacher distributes books to the students)

The case-category GO presupposes the occurrence of A. One characteristic that distinguishes GO from A/D (and also O/I/L) relates to its non-selection for subjectivalisation. Thus a sentence like 41 would be unacceptable.

41. * pitraa / pitaa - putrah - pustakam - dadaati
A i A nom GO nom O acc
by father / father - son - book - gives

120. Fillmore, C.J., (1971), p.259.

The case-category GO is distinct from R/O/F also. If the subjectivalisation-rule does not apply to A/D and R/O/F along with GO, is present in the case-frame, the process of passivisation follows and R/O/F, not GO, is selected for agreement with the V. Thus, 40' and not 40'' is acceptable. In 40', O rather than GO has been subjectivalised.

40'. gurunaa - chaatre bhyah / chaatreṣu - pustakaani -
 A i GO d GO l O nom
 by teacher - to students / in students - books
 vitiiryante
 are distributed

(books are distributed to students by the teacher).

40''. * gurunaa - chatraah - pustakaani - vitiiryante
 A i GO nom O acc
 by teacher - students - books - are distributed

However, a sentence like 36 above is an exception to this characteristic of GO. If the subjectivalisation-rule does not apply to A in sentence 36, the process of passivisation operates and GO is optionally subjectivalised. But, there is one condition that in such constructions containing verbs like 'yaati' and its equivalents, GO does not cooccur with F/R/O. Again, this exceptionality of GO is valid only when it occurs in the case-frame of verbs which are parallels of 'yaati' (go). Thus, sentence 36' is the alternative form of 36 above (in case subjectivalisation-rule has not applied).

36'. tena - nagaram - yaayate
 A i GO nom
 by him - town - is gone
 ((it) is gone to the town by him)

The case-category GO, like SO, may be assigned to NP's which do not refer to time and place, as in sentences 37-40. Secondly,

the NP specified as GO may be a complex structure as in sentences 42, 43.

42. sevakah - [gehaat / gehasya - antika] - yaati
 A GO O ab O g
 servant - from house/ of house - near - goes
 (the servant goes near the house)

43. putrii - [pituh - antika] - yaati
 A GO D g
 daughter - of father - near - goes
 (the daughter goes near her father)

The case-category GO in sentences 42, 43 above, is allowed for by the rule-schema $NP \rightarrow N \left(\begin{smallmatrix} O \\ D \end{smallmatrix} \right)$.

II.4.6.1. Consider, next, sentences 44, 44', 44'' in which the GO has different surface-realizations which account for some semantic distinction. It is not clear, at present, how to get round this problem.

44. kaamukah / sa - daasyaa - dhanam - samprayacchate
 A nom A nom GO i O acc
 lecher / he - to maid-servant - money - gives
 (a lecher/he gives money to the maid-servant)

- 44'. sa - daa syai - dhanam - samprayacchati
 A nom GO d O acc
 he - to maid-servant - money - gives
 (he gives money to the maid-servant)

- 44''. * kaamukah - daasyai - dhanam - samprayacchati
 A nom GO d O acc
 lecher - to maid-servant - money - gives

In sentence 44, the GO is realised inflexionally as 'i' and in 44' as 'd' along with the difference in verb-ending (i.e. it is 'te' in 44 and 'ti' in 44'). These surface-distinctions impose meaning-distinctions (sentence 44, 44') which may be culture-specific.

II. 4. 6. 2.

In this section, a set of sentences (45-49) which contain NP's (unspecified with reference to any case-category) ending in 'd'-inflexion (cf. GO in sentences 36, 39, 40) and which can be derived from complex structures underlying sentences 45' - 49', are considered.

45. ambaa - putraaya - s'ete
 A nom d
 mother - for son - sleeps
 (mother sleeps for her son)
- 45'. ambaa - putram - priinayitum - s'ete
 A nom R acc VNom
 mother - son - to please - sleeps
 (mother sleeps to please her son)
46. kanyaa - chaatraaya - tiṣṭhate
 D nom d
 girl - for student - stays
 (the girl stays for the student)
- 46'. kanyaa - chaatram - priinayitum - tiṣṭhati
 D nom R acc VNom
 girl - student - to please - stays
 (the girl stays to please the student)
47. sevakah - phalaaya - yaati
 A d
 servant - for fruit - goes
 (the servant goes for fruit)
- 47'. sevakah - phalam - aaptum - yaati
 A nom O acc VNom
 servant - fruit - to get - goes
 (the servant goes to get fruit)
48. sa - gurave - pustakam - aanayati
 A d O acc
 he - for teacher - book - brings
 (he brings a book for his teacher)

- 48'. sa - gurave - daatum - pustakam - aanayati
 Anom GO d V_{Nom} O acc
 he - to teacher - to give - book - brings
 (he brings a book to give it to his teacher)

49. svarṇakaarah - kuṇḍalaaya - svarṇam - nayati
 A nom d O acc
 gold-smith - for earring - gold - carries
 (the goldsmith carries gold for earring)

- 49'. svarṇakaarah - kuṇḍalam - nirṇaatum - svarṇam - nayati
 A nom F acc V_{Nom} O acc
 goldsmith - earring - to make - gold - carries
 (the goldsmith carries gold to make earring)

One may argue that GO defined as 'the destination' (II. 4. 5.), may be assigned to the unspecified NP's in 44-48 above. But, the definition, as given by Fillmore, needs further amplification. The case-category GO is to be assigned to an entity which is an obligatory part of the case-frame of the verb concerned, in addition to its being 'the destination' to which the action is directed. In 44-48, the unspecified NP's are not an obligatory part of the verbs (in 44-48), rather they are obligatory part of an embedded S.

One might argue that there may be a semantic interpretive rule to account for the meaning (as indicated in 44'-48' above). But, if sentences 44-48 are derived via 44'-48', the problem of postulating an interpretive rule is avoided and, besides, there is no problem with regard to case-specification. However, despite the restriction on the items that can occur under V_{Nom} in sentences 44'-48' (cf. sentences 44''-48'' below), there remains the difficulty of recovering¹²¹ the deleted items (specified as V_{Nom} in sentences 44'-48').

121. Chomsky, N., (1965), pp.132, 222 (f.n.1).

comparable to 'for-phrases' specifying Benefactive and Delegative, are differently realised (as in 49, 50 below). Sentence 49 cannot have the interpretation of sentence 50.

49. A sa - mitraaya - yaasah - kriinaati
 he - for friend^d - dress^o - buys
 (he buys a dress for his friend)

50. raamaat prati - sa - yaasah - kriinaati
 ? A ab PP A o
 from r. - he - dress - buys
 (representing r. he buys a dress)

In so far as sentence 49 is concerned, it will have a derivation similar to 47 above. In other words, sentences like 49 will be derived from complex underlying structures and there will be no need to specify a case-category in sentences like 49.

Though the syntactic similarity (in respect of 'movement around objectives and passivisation')¹²⁴ between Benefactive (for-phrases) and Dative (constructions) in English, does not obtain in Sanskrit, yet the treatment of sentences like 44-49 as derived from complex structures falls in line with the suggestion that 'for-phrases' and their equivalents come from underlying complex structures.

As mentioned earlier, complex sentences are not taken up in this analysis and hence they are not discussed further.

II.4.7. The case-category Ext(ent) has not been explicitly mentioned by Fillmore. But he hints¹²⁵ at the possibility of and necessity for

124. Moore, T. (1971), p.4.

125. Fillmore, C.J., (1971), p.260.

such a case-category, in view of sentences like 51. 52.

51. sevakah - dinam - abhramat
 A Ext
 servant - day-long - wandered

 (the servant wandered day-long)

52. nadii - kros'am - vahati
 O Ext
 river - two miles - flows

 (the river flows for two miles)

The case-category Ext can cooccur with SO, GO as in 53.

53. chaatravaasaat - [vidyaalayam yaavat] - [ayam - maargah]
 SO ab GO acc Es
 from hostel - school till - this road

 kros'am - asti
 Exy acc
 two miles - is

 (from the hostel, this road is two miles up to the school)

Fillmore argues¹²⁶ that Ext cannot occur with SO. But, in

sentences 53 (above) and 54 (below) Ext occurs with SO, GO and in

55 with L.

54. adyatah - [griishmam yaavat] - [triin maasaan] - satram -
 SO GO Ext O
 from today - summer till - three months - session

 calisyati
 will continue

 (the session will continue from today till summer for three months)

55. sa - dine - ghantaadvayam - vyaakaranam - apathat
 A L Ext O
 he - in day - for two hours - grammar - read

 (he read grammar in the day for two hours)

126. Fillmore, C.J., (1971), p.260.

II.4.7.1. Consider, now sentences 56, 57 containing the underlined NP's which are to be derived from complex underlying structures in sentences 56', 57'.

56. [ayam vidyaalayah] - chaatravaasaat - $\frac{\text{kros'ah}}{\text{nom}} / \frac{\text{kros'e}}{\text{l}}$ -
 Es SO
 this school - from hostel - two miles/at two miles
 asti
 is

(this school is two miles from the hostel)

- 56^t. [ayam vidyaalayah] - chaatravaasaat - kros'am -
Es SO Ext
this school - from hostel - two miles -

atikramya - \triangle - asti
 V_{Nom} I
 having crossed - \triangle is

(having crossed two miles from the hostel, there is the school

(in \triangle))

57. adyataḥ - maase - diipotsavaḥ - asti
 SO 1 Es
 from today - in one month - festival of lights - is

(the festival of lights is one month ahead)

- 57¹. adyatah - maasam - atikramya - diipotsavam - Δ - asti
SO Ext VNom Es L
from today - one month - having crossed - festival of lights - Δ is

(having passed one month from today, there is the festival of lights in \triangle).

The NP's underlined in 56, 57, do not mean that the school is two miles long or the festival is extending for one month, rather they indicate 'beyond two miles/one month' - and have to be interpreted in terms of sentences 56', 57' respectively. It may be noted that sentences 56, 57 have a dummy L in the underlying structures (as in 56', 57'). The NP's underlined in sentences 56, 57, may be left without case-indication as

they include the L as well (as apparent from 56', 57') and besides, case-categories need to be specified in underlying structures only.

Sentences like 56, 57 differ from sentences 51-55 (above) with regard to the nature of Ext as is evident from sentences 58, 59. Assuming that the mountain and the school are in the same direction, sentence 58 is acceptable, but sentence 59 is not. This fact lends support to the position that the underlined NP's in 56, 57 come from the complex structures (in sentences 56', 57')

58. [asmaat sthaanaat] - parvataḥ - kros'am - asti
 SO Es Ext
 from this place - mountain - two miles long - is

 vidyaalayaḥ - ca - kros'aḥ / kros'e - asti
 Es nom l
 school - and - at two miles - is

 (from this place, the mountain is two miles long and the school
 is at two miles)

59. * [asmaat sthaanaat] - parvataḥ - kros'am - asti
 SO Es Ext
 from this place - mountain - two miles - is

 vidyaalayaḥ - ca - kros'am - asti
 Es Ext
 school - and - two miles - is

II.4.7.2. Consider next sentences 60, 61. It is not clear how the semantic distinction between them, without referring to morphological phenomenon, can be accounted for. In 60, not in 61, the interpretation indicates the completion or fruition of the action.

60. chaatraḥ - dinena - upanyaasam - apathat
 A Ext i O acc
 student - day-long - novel - read

 (the student read (completely) the novel during the day)

61. chaatraḥ - dinam - upanyaasam - apaṭhat
 A Ext acc O
 student - day-long - novel - read
 (the student read the novel day-long)

The Ext in 60 is realised with an i-inflexion, and in 61 with an acc. It may suggest that a sentence like 60 could be derived from a structure like that underlying sentence 60', but it involves the status of adverbials which is not discussed in this analysis.

- 60'. chaatraḥ - dinam - upanyaasam - niḥs'eṣam - apaṭhat
 A Ext acc O acc saphalam
 student - day-long - novel - completely - read
 fruitfully
 (the student read the novel day-long completely/fruitfully)

A further distinction between 60 and 61 is related to negation.¹²⁷

Sentence 60'' is unacceptable (it may be noted that the adverbial in 60' cannot cooccur with negation) but sentence 61' is ambiguous.

- 60''. * chaatraḥ - dinena - upanyaasam - no - apaṭhat
 A Ext i O
 student - by day - novel - not - read
- 61'. chaatraḥ - dinam - upanyaasam - no - apaṭhat
 A Ext acc O
 student - day-long - novel - not - read
 (the student did not read the novel (at all) day-long)
 (the student did not read the novel day-long (but for a while))

II.4.8. The case-category Pa(th) has been suggested recently¹²⁸ and is justified on the basis of constructions like 62, 63.

62. kandukāḥ - gavaakṣeṇa - ves'māni - apatat
 O nom Pa i GO 1
 ball - through window - in room - fell
 (the ball fell in the room through the window)

127. In this analysis constructions containing negation have not been discussed.

128. Fillmore, C.J., (1971), pp.259-260.
 cf. Bennett, D.C., (1972), pp.58-67.

63. sevakah - ucchistam - mahaanasaat - gavaaksena -
 A O SO ab Pa i
 servant - leftover - from kitchen - through window

Ṭpraakaarasya upariṣṭaāt - maarge - kṣipati
 Pa O g GO l
 of fence from above - on road - throws

(the servant throws the garbage on the road through the window
 over the fence)

The case-category Pa is distinguished from SO, GO, Ext in the sense that it can occur more than once in a simplex sentence (as in 63 above). It is distinct from L also, as its re-occurrence cannot be interpreted like L (in sentence 8) as an instance of multiple self-embedding (i.e. one occurrence of Pa cannot be conceived of as contained within the other). Moreover, constructions like 63 cannot be interpreted as cojoined structure (cf. sentences 10, 11). It is one action which is associated with two Pa's in sentence 63 above. It has been argued that this Pa case-category can be repeated indefinitely,¹²⁹ in a simplex sentence. But, perhaps it is possible theoretically only. In Sanskrit, it is doubtful whether more than two occurrences of Pa are possible without making the construction complex. One important characteristic of Pa lies in the fact that it relates to space-orientation only, and not to temporal orientation.

II.4.9. Fillmore is of the opinion¹³⁰ that a case-category like Ext may combine SO, GO in certain constructions. In sentence 64,

129. Stratton, C.R., (1971), p.226.

130. Fillmore, C.J., (1971), pp.260-261.

SO and GO indicate what is Ext in 65. Thus he proposes the possibility of a 'hypercase.'¹³¹ But as indicated in 54 (above) Ext can cooccur with SO and GO.

64. [taṭaṇham - koṭṭa - maargaḥ] - vaaranastriit - ste
Es nom SO
Tottenham Court road - from Warren street
ste s'anaat - [auksphorḍa - maargam yaavat] - asti
ab GO acc
station - Oxford road till - is
(Tottenham Court road runs from Warren Street station to
Oxford Street).
65. [taṭaṇham - koṭṭa - maargaḥ] - ardhakros'am - asti
Es Ext acc
Tottenham Court road - one mile - is
(Tottenham Court road is one mile (long))

case-categories dominated by super ordinate constructions.¹³³

Fillmore has not worked on this suggestion himself. If this position is accepted, then, all sentences containing temporal or spatial orientation, will have complex deep structures.¹³⁴ Secondly, in the case of verbs like 's'ete' (sleeps), 'kruidati' (plays), 'pacati' (cooks), 'yaati' (goes), 'vis'ati' (enters), 'patati' (falls), there may be no justification for assigning some of the cases related to space and time (it is not the case that both of them may be obligatory parts of a case-frame, but one or the other may be obligatory) to a superordinate structure. Besides, Fillmore is not explicit how this 'hypercase' is to be specified in the superordinate structure (i.e. under P or S: it cannot be under M as cases are not dominated M). Thus, there appears to be no syntactic or semantic justification for this suggestion, and so it is not incorporated in this analysis.

133. Fillmore, C.J., (1971), p.258: "clauses that are capable of designating actions or events or situations which can be located in space and time are themselves to be embedded into higher sentences containing as their main verb something like (occur) or (happen), with the understanding that it is this higher verb which takes location - and - time introducing cases." This statement implies that all structures have superordinate locative/temporal constructions and thus, if followed, it would blur syntactic distinctions which do exist.

134. cf. Lakoff, G. (1968): Lakoff, in support of more abstract deep structures would like to remove adverbial phrases from the deep structures of simplex sentences (see II.3.5.2.).

2. raamah - baalakah - asti
 r. - boy - is
 (r. is a boy)

have engaged the minds of linguists, who have classified such sentences as 'copulative' and 'existential'.⁴ The copulative class consists of sentences like 3-7.

3. raamah - [ayam chaatraḥ] - asti
 Es T
 r. - this student - is
 (r. is this student)
4. raamah - chaatraḥ - asti : class-membership
 Es T
 r. - student - is
 (r. is a student)
5. hariṇah - pas'uh - asti : class-inclusion
 Es T
 deer - animal - is
 (deer is an animal)
6. phalam - madhuram - asti : property-assignment
 Es T
 fruit - sweet - is
 (fruit is sweet)
7. baalikaa - gr̥he - asti : locational reference
 Es L
 girl - in house - is
 (the girl is in the house)

It may be noted that the L in 7 can be a complex structure as in 7'.⁵

- 7' mandiram - [upavanasya dakṣiṇam] - asti
 Es L O g
 temple - of garden south - is

4. Lyons, J., (1968), pp.388-90.

5. See II.4.3.1.

The above sentences are distinguished from an existential sentence like 8

8. iis'varah - asti
 god - is

(there is a God)

It is apparent that an existential sentence like 8 has one argument⁶ only, unlike sentences 3-7. But, as an existential sentence 8 is an exception. Because a sentence like 9

9. * simhah - asti
 lion - is

is unacceptable unless it is in reply to a query or it has a locational argument as in sentence 10.

10. vane - simhah - asti
 L Es
 in forest - lion - is

(there is a lion in the forest)

However, a sentence like 11 with a verb 'bhavati', (becomes) and no locational phrase, is possible. Though, I suspect that sentence 12 as opposed to sentence 13, is not acceptable.

11. simhah - bhavati - parantu - ekas'rNgah - no - bhavati
 lion - exists - but - unicorn - not - exists

(lion exists but unicorn does not exist)

12. * simhah - bhavati
 lion - exists

13. simhah - vane - bhavati
 lion - in forest - exists

(lion exists in the forest)

For the analysis of case-relations, it appears difficult to justify the retention of this distinction between copulative (including

6. See II.1.1. (f.n. 4).

locational) and existential, specially keeping in view sentences like 7, 7' and 10. If the distinction needs to be maintained it should be between sentences 3-6 and 7, 7', 10 i.e. copulative vs. existential and/or locational. Bach refers to such constructions as containing either an NP (in sentences 3-5) or an adjective (in sentence 6) or locational phrase (in sentences 7, 7' and 10).⁷ Fillmore calls such constructions (3-7' above) 'nominal predicates' or 'N be N type'.⁸ With slight modification, I will refer to such constructions, henceforth, as NP - asti - NP sentences.

III.1.1. The NP - asti - NP sentences (3-7', 10), though considered distinct from each other (as indicated by the characteristics mentioned on the right hand side above), are taken together for specification of the case-categories. The case-categories that may occur in NP - asti - NP sentences are discussed below.

The case-category Es(sive) is assigned to the arguments underlined in sentences 3-7', 10, the other case-categories being T(ranslative) and L(ocative). In sentences 7, 7', 10, Es is specified for NPs 'baalikaa' (girl), 'simhah' (lion) and 'mandiram' (temple) and L for the NP's 'grhe' (in house), 'upavanasya - dakṣiṇam' (south of temple) and 'vane' (in forest).⁹ In sentences like 7, 7', 10 the L can never be selected for subjectivalisation. Thus, a sentence like 14 is unacceptable

7. Bach, E., (1967a), p.462.

8. Fillmore, C.J., (1968a), p.84.

9. L(ocative) is discussed in II.4.4.

i.e. there is no equivalent to the English sentence: 'the house has a girl in it.'

14. * grham - baalikaa - asti
house - girl - is

In sentence 6, 'phalam' (fruit) is Es. In any construction like 6, the adjective (i.e. 'madhuraam' (sweet)) cannot be Es as the selectional features of 'madhuraam' derive from the Es ('phalam'). Compare sentence 6'

- 6'. sitaa - madhuraa - asti
Es T
sugar - sweet - is
(sugar is sweet)

The adjective 'madhuraam' in sentence 6 cannot be considered a modifier of the Es i.e. 'phalam'. Because, in that case there would have been another case-category in the case-frame (such as L in sentence 15).

15. [madhuraam phalam] - paadape - asti
Es L
sweet fruit - on tree - is
(there is sweet fruit on the tree)

If a sentence does not contain another case-category (i.e. other than Es and the adjective), the adjective cannot be a modifier of the Es, whatever may be the word-order of the sentence. In other words, the adjective will realise a distinct case-category and not be an expansion of the case-category Es as in sentence 15 above. In sentences 16 and 16'

16. tarunah - as'vah - asti
young - horse - is
16'. as'vah - tarunah - asti
horse - young - is
both = (the horse is young)

the adjective 'taruṇaḥ' (young) cannot be a modifier.¹⁰ However, in a sentence like 17

17. iis'varah - dayaaluḥ - asti
 Es T
 god merciful - is

(God is merciful / there exists merciful God)

the adjective 'dayaaluḥ' may be interpreted as a distinct case-category (i.e. T) or as a modifier of 'iis'varah'. But, this ambiguity arises due to the exceptionality (which appears to be non-linguistic) of a sentence like 8 above.

In sentences 4, 5 above, 'raamaḥ' and 'hariṇaḥ' are Es. 'chaatraḥ' and 'pas'uḥ' in these sentences cannot be Es, because they take on the features of Es, i.e. 'raamaḥ' and 'hariṇaḥ' (cf. sentences 24-30). Even if it is argued that there is a difference between 'chaatraḥ' / 'pas'uḥ' (sentences 4, 5) and 'madhuraṃ' (sentence 6) taking on the features of Es, this does not affect the postulation of the same category T for all these i.e. 'chaatraḥ', 'pas'uḥ' and 'madhuraṃ'. Besides, I suspect that 'chaatraḥ' and 'pas'uḥ' cannot modify Es i.e. 'raamaḥ' and 'hariṇaḥ' respectively ('madhuraṃ' in sentence 6 does modify Es but in that case it is not a case-category distinct from Es). Thus sentences 18 and 19¹¹ are unacceptable.

10. It may be argued that intonational pattern may account for predicative and attributive interpretations of the same adjective. But, as mentioned in the beginning, the intonational pattern is ignored in this analysis.

11. It may be asked whether 'chaatraḥ raamaḥ' and 'pas'uḥ hariṇaḥ' (in 18, 19) are possible as appositionals. I doubt the correctness of this position in face of the untenability of postulating reduced relative clauses in Sanskrit (see sentences 53-54').

18. * chaatrah raamah - paathas'aalaayaam - asti
 student r. - in school - is
19. * pas'uh harinah - maarge - asti
 animal deer - on road - is

Besides, Es in sentence 4 above must be **[+ definite]**. Thus a sentence like 20 is unacceptable, though 21 is acceptable.

20. * baalakah - chaatrah - asti
 boy - student - is
- (boy is a student)
21. ayam baalakah - chaatrah - asti
 this boy - student - is

It may be argued that sentence 20 is acceptable. But it could be so only in a context which makes 'baalakah' **[+ definite]**.

In the case of sentences like 22, 'satyam' and 'saundaryam' both have the feature **[+ definite]**. It may be noted that sentence 23 is unacceptable.

22. satyam - saundaryam - asti
 Es T
 truth - beauty - is
- (truth is beauty)
23. * satyaani - saundaryam / saundaryaani - santi
 truths - beauty / beauties - are

In sentence 3 above the Es, 'raamah' and 'ayam chaatrah' are both **[+ definite]**. In such equative sentences either of the NP^ts may claim to be Es. There are two possibilities: either both NP^ts may be specified as Es or one of the NP^ts may be Es and a rule selects this Es for subjectivalisation and the other is T. The choice between these two options, I leave as an open question. Compared with sentence 3 above, sentence 3' contains 'ayam chaatrah' specified as Es.

- 3'. [ayam chaatrah] - raamah - asti
 Es T
 this student - r. - is
- (this student is r.)

The case-category Es as mentioned above (pp. 137, 141), is assigned to NP's 'raamah' (sentences 3, 4), 'harinah' (sentence 5), 'phalam' (sentence 6), 'baalikaa' (sentence 7), 'mandiram' (sentence 7') and 'sinhah' (sentence 10). This widening of the scope of Es is unlike that of Lehiste.¹² It is difficult to say what Fillmore would mean by Es, because he has mentioned nothing (except the term) in this connection.¹³

III. 1.2. Now, consider the case-categories that may occur in addition to Es in the above sentences. T(ranslative) is a case-category that may cooccur with Es. This case-category can be assigned to NP's 'ayam chaatrah' (sentence 3), 'chaatrah' (sentence 4), 'pas'uh' (sentence 5), 'madhuran' (sentence 6). This specification of the case-category T does not take into consideration the distinctions between these NP's mentioned on p. 137. There are two reasons for this. In the first instance, the features of Es determine the features of T. Compare sentences 24-27 with sentences 3-6 (above) respectively.

24. siitaa - [iyam chaatraa] - asti
 Es T
 s. - this student - is
 (s. is this student)
 siitaa [+feminine], [+singular]
 iyam / chaatraa : [+feminine], [+singular]

12. Lehiste, L., (1969), pp. 332-33: Her Essive includes the underlined NP's in sentences like (i) NN is our ambassador in London' (ii) 'NN is the best student in the class', (iii) 'NN is one of the best students in the class', only.

13. Fillmore, C.J., (1968a), p. 84.

25. [te baalakaah] - chaatraah - santi
 Es T
 those boys - students - are
 (those boys are students)
 te baalakaah : [+ masculine], [+ plural]
 chaatraah : [+ masculine], [+ plural]

26. harinaah - pas'avah - santi
 Es T
 deer(s) - animals - are
 (deer are animals)
 harinaah : [+ masculine], [+ plural]
 pas'avah : [+ masculine], [+ plural]

27. phalaani - madhuraani - santi
 Es T
 fruits - sweet - are
 (fruits are sweet)
 phalaani : [- mas] , [+ plural]
 [- fem]
 madhuraani : [- mas] , [+ plural]
 [- fem]

However, there are exceptions as well. But such NP's are lexically determinate to the features of gender and number as in sentences 28-30.

28. saa - [mama mitram] - asti
 Es T
 she - my friend - is
 (she is my friend)
 saa : [+ feminine], [+ singular]
 mitram : [- mas] , [+ singular]
 [- fem]
30. saa - [mama daaraah] - asti
 Es T
 she - my wives - is
 (she is my wife)

saa : [+ feminine], [+ singular]

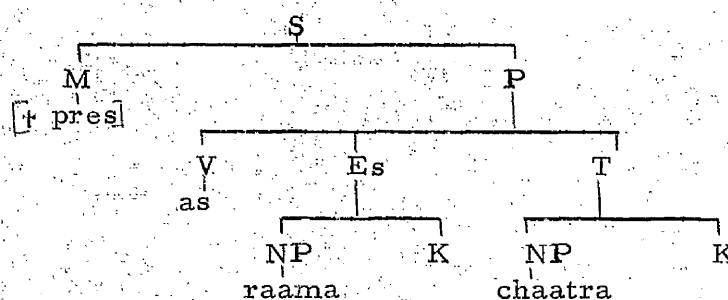
daaraah : [+ masculine], [+ plural]

asti : [+ singular]

Secondly, the NP's specified as T behave similarly with regard to subjectivalisation. If Es is not selected for subjectivalisation (as the subjectivalisation-rule applies optionally), T also cannot be selected for subjectivalisation.

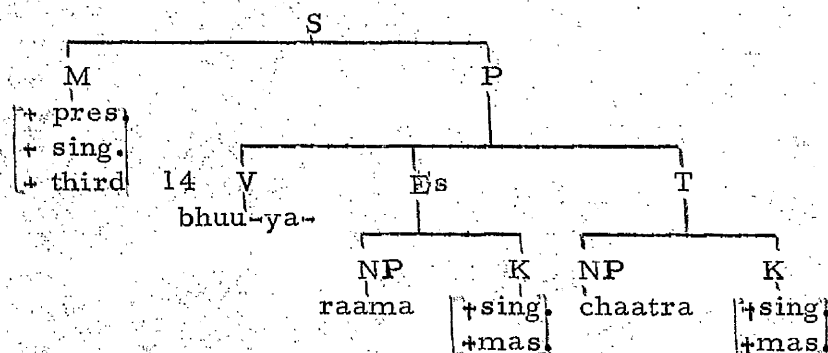
Sentences 4 & 4¹⁴ (below) have an underlying structure as in figure I.

Figure I



Es is not selected for subjectivalisation. Consequently, as T is never subjectivalised, no case-category enters into concordial agreement with the V and the process of passivisation without subjectivalisation (II.1, II.2) operates. The result is as in figure II.

Figure II



14. A morphophonemic rule will substitute 'as' under V with 'bhUU'

The affix-substitution rule replaces features by affixes. The final form is as in figure IV via figure III.

Figure III

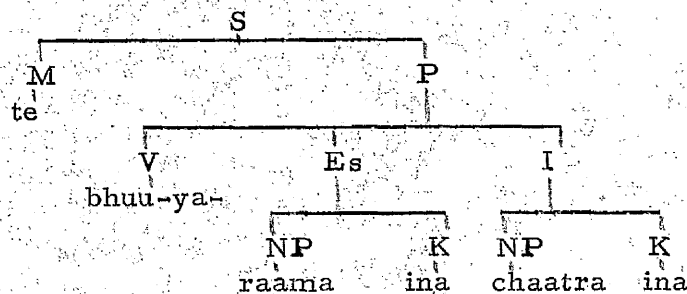


Figure IV



Thus, the alternative form of sentence 4 is realised as 4^r.

- 4^r. raamena - chaatrena - bhuuyate
 Es T
 by r. - by student - is become

((it) is become student by r.)

Similarly, sentences 3, 5, 6 have alternative forms as 3^u, 5^r, 6^u.

- 3^u. raamena - [anena chaatrena] - bhuuyate
 Es T
 by r. - by this (by) student - is become

((it) is become this student by r.)

- 5^r. harinaa - pas'unaa - bhuuyate
 Es T
 by deer - by animal - is become

((it) is become animal by deer)

- 5^u. phalena - madhurena - bhuuyate
 Es T
 by fruit - by sweet - is become

((it) is become sweet by fruit)

In all the above sentences (3" - 6") T could not be selected for subjectivalisation even in case of non-subjectivalisation of Es.

III.1.3. The second case-category that may cooccur with Es is L(ocative).¹⁵ The case-category L includes temporal as well as spatial distinctions. In sentences 7, 7', 10 above, the NP's 'grhe' (in house), 'upavanasya - dakṣiṇam' (south to the garden) and 'vane' (in forest) are L.

The third case-category that may cooccur with Es, is SO(urce)¹⁶. Consider sentence 31.

31. chaatraḥ - vihaaraat - asti
Es SO
student - from Vihaara - is
(the student is from Bihar)

III.1.4. The fourth case-category that may cooccur with Es is GO(al).¹⁷ In sentence 32 GO cooccurs with SO as well.

32. [ayam maargah] - chaatravaasaat - [vidyaalayam yaavat]
Es SO GO
this road - from hostel - school till
asti
is
(this road runs from the hostel up to the school)

15. For details see II.4.4.

16. For details see II.4.5.

17. For details see II.4.6.

In sentences 33, 34 GO cooccurs with Es and L, SO remaining unspecified.

33. ghāte - [mukham yaavat] - jalām - asti
 L GO Es
 in pitcher - brim full - water - is
 (there is water in the pitcher up to its brim)
34. guruh - vidyaalaye - [saayam yaavat] - asti
 Es L GO
 teacher - in school - evening till - is
 (the teacher is in the school till evening)

III.1.5. Another case-category that may cooccur with Es, is

Ext(ent).¹⁸ Consider sentences like 35, 36.

35. [ayam maaragh] - krośam - asti
 Es Ext acc
 this road - two miles - is
 (this road is two miles long)
36. godhumaḥ - [daśa kilograamaḥ] - asti
 Es nom Ext nom
 wheat - ten kilograms - is
 (Wheat is ten kgs. in weight)

The case-category Es may cooccur with an NP whose morphological representation is marked by 'genitive',¹⁹ as in sentences 1 and 37.

37. [putrasya - pustakam] - asti
 Es g nom
 of son - book - is

(the son has a book / there is the book of son)

Sentence 37 is ambiguous and may have both interpretations given above.

With either interpretation, the Es in a sentence like 37 is a complex

18. For details see section II.4.7.

19. For details see chapter IV.

structure. But, if this complexity of structure is accepted, a sentence like 37 would have a case-frame like [Es — I], with only one case-category therein. It is unusual to have Es as the only case-category, as a sentence like 8 above has been considered exceptional. Now, it may be that Es may occur as the only case-category in a case-frame, provided the Es is a complex structure containing an N marked with genitive.

III. 2. It is evident from the above analysis that the case-categories that may be assigned to NP's in NP-asti-NP sentences are different from the case-categories like A/D/R/O/F. At this point it may be relevant to look into the suggestions of Fillmore regarding the NP - asti- NP sentences. Though he mentions²⁰ that the case-categories in the case-frames of NP - asti - NP sentences are different from A/D/R/O/F, he does not discuss them in detail. Their inclusion under the sub-title 'Problems and Suggestions',²¹ perhaps, explains his sketchy treatment. He refers to case-categories like Es and T but does not analyse them at all. He suggests that a sentence equivalent to 38 may have the case-category A assigned to 'raamah'.

38. raamah - muurkhah - asti
 r. - fool - is
 (r. is a fool)

He argues that in certain constructions items like 'muurkhah' (fool) behave like a V occurring in a case-frame like [A — I]. But, this suggestion does not appear to be convincing as it is not clear at all why sentence

20. Fillmore, C.J., (1968a) p. 84: "...sentences of the N be N type ... represent a distinct sentence type from those involving any of the case-relations discussed above."

21. Fillmore, C.J., (1968a), p. 81.

38 is different from sentences 3-6 above, regarding case-specification. Besides, in sentences like 39, which has a nonevaluative predicate, 'mama - bhraataa' cannot function like V and as there is no syntactic difference between them it would not be proper to treat 'raamah' in 39 as a case-category different from 'raamah' in sentence 38.

39. raamah - [mama bhraataa] - asti
Es T
r. - my brother - is
(r. is my brother)

It appears that sentences 3-6, 38, 39 should have a similar treatment for case-specification.

Fillmore says that some new case-category may be invented. 22

But he does not suggest any himself. His reference to Bach's suggestions²³ does not appear to be helpful. Bach proposes to derive constructions like 'adjective + noun' from constructions like 'noun-is-adjective'.²⁴ But this proposal suggests nothing about the case-categories that can be assigned to arguments in such a construction.

Bach says that in constructions comparable to NP - asti - NP sentences, verbs like 'asti' (copula) are "distinguished syntactically from most true verbs by the fact that they have no selectional restrictions in themselves."²⁵ The selection reaches across from subject to object or complement.²⁵ Usually the selection restriction is between subject and verb/verb and object/subject-verb-object. In a case-grammar,

22. Fillmore, C.J., (1968a), p. 84.

23. Bach, E., (1968), pp. 98-104.

24. Bach, E., (1968), p.102, f.n.7.

25. Bach, E., (1967), pp. 476-77.

selectional restrictions operate between the V and one or more case-categories. In an NP - asti - NP sentence there does not appear to be any cooccurrence restriction between 'asti' and one NP. Consider the acceptable sentences 40, 42 along with 41, 43 which are not acceptable (it may be noted that sentence 43 is acceptable if a metaphorical sense is implied).

40. raamah - phalam - khaadati
 A O
 r. - fruit - eats
 (r. eats fruit)

41. * raamah - phalam - asti
 r. - fruit - is

42. raamah - pas'um - taadayti
 A R
 r. animal - beats
 (r. beats the animal)

43. * raamah - pas'uh - asti
 r. - animal - is

In the case of verbs, it should be enough to state co-occurrence restrictions in terms of the case-categories that may occur in their respective case-frames. But in the case of 'asti' it is not so. The case-frame [Es, T —] allows a sentence like 4 and also a sentence like 41. In other words Es and T remain at a level different from that of A/R/O (in sentences 40, 42).

However, the verb 'asti' does preclude certain case-categories from occurring in its case-frame. F(active) is one such case-category that cannot co-occur with Es as in 44.

44. * tandulaah - odanam - santi
 Es F
 rice(s) - boiled rice - are

III. 3. In the preceding discussion, the case-categories that may occur in the case-frames of NP - asti - NP sentences, have been specified with one assumption that 'asti' (is) is always present. But, in fact, this is not the case.

In a sentence which is not marked for past or future, the 'asti' is optional in surface structure. Thus in sentence 45 (a) the time-element expressed in the sentence is simultaneous with the point of reference in time (i.e. speaking). Optionally, it need not be expressed at all as in sentence 45 (b). In sentence 46, 'aasiit' (was) refers to a time which is anterior to the point of reference (in time) and in sentence 47, 'bhaviṣyati' (will be) refers to a time which is posterior to the point of reference (in time).

45 (a).

[ayam janah]	-	adhyaapakah	-	asti
Es		T		
this man	-	teacher	-	is

 (this man is a teacher)

(b).

ayam janah	-	adhyaapakah
this man	-	teacher

[It is not relevant to this discussion whether sentences like 45' / 45(b) involve a point of reference in time or none at all.]

45'.

vane	-	simhah
in forest	-	lion

 : (i) there is a lion in the forest
 (ii) lions live in forests

46.

[ayam janah]	-	adhyaapakah	-	aasiit
Es		T		
this man	-	teacher	-	was

 (this man was a teacher)

47.

[ayam janah]	-	adhyaapakah	-	bhaviṣyati
Es		T		
this man	-	teacher	-	will be

 (this man will be a teacher)

The above-mentioned characteristic of 'asti' has assumed some significance in view of the differing interpretations by grammarians and logicians regarding the status of the verb in a sentence in Sanskrit.

The Sanskrit grammarians hold the view that every sentence ('vaakya') consists of a verbal form.²⁶ Some scholars interpret the relevant rule as referring to a verb which ends in an affix of the 'tiN'-class only and not to a verbal form in general.²⁷ Thus, a sentence like 48 which consists of a verb 'ayaat' (went) ending in 'tiN'-class affix (i.e. is 'tiNant') is accepted as a sentence.

48. raamah - ayaat
A
r. - went

This interpretation would bar 49 as a sentence as it contains a verbal form 'yaatah' which ends in a 'sup'-class affix (i.e. is 'subanta' like NP's) rather than a 'tiN'-class affix.

49. raamah - yaatah
A
r. - went

One distinction between 'tiNanta' and 'subanta' verbal forms, though irrelevant for specifying case-categories (and this is crucial), relates to gender. The 'tiNanta' verbal form 'ayaat' in 48 is gender-neutral, but the 'subanta' verbal form 'yaatah' in 49 is not (cf. saa-yaataa : she - went). Even the scholars favouring the interpretation of the rule (f.n. 26) to include the 'tiNanta' verbal forms only, would

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26. Bhartrhari, Vaakyapadiyam - II, 1-2
Iyer, K.A.S., (1969), p. 419 (61-19)
Mahaabhaasya of Patanjali under rule II. 1. 1
Subrahmanya Sastri, P.S., (1957), vol. V, p. 204: 'ektiN-vaakyam'
27. Matilal, B.K., (1966), p. 377
Subrahmanya Sastri, P.S., (1957), vol. V, p. 204.

treat 'tiNanta' and 'subanta' as verbal-forms for case-specification.

Thus, the interpretation restricting the rule to 'tiNanta' verbal form only, does not appear to be appropriate and the relevant rule must be interpreted to refer to verbal form in general. This interpretation would be in keeping with the statement of 'Patañjali'²⁸ that there is no sentence which does not contain a verbal form. It is significant that he uses the word 'kriyaa' (verb) rather than the word 'tiNanta' (i. e. a form ending in a tiN-affix).

The above-mentioned characteristics of 'asti' (i. e. its optional occurrence in certain constructions and of a verbal form ending both in 'tiN'-class and 'sup'-class of affixes) were picked up by the logicians who differed with the grammarians on accepting a verbal form as a necessary constituent of a sentence. The optional non-occurrence of 'asti' in sentences like 45(b) above, became a strong argument for them. They cited examples like 50²⁹ to prove their point.

50. trayah - kaalaah
 three - times

(there are three time-stages)

They argued that a verbal form like 'santi' (are) cannot be added to 50, because 'santi' refers to one time-stage only (i. e. present). Again, neither "aasan" (were i. e. past), nor 'bhavisyanti' (will be i. e. future) can be added. Because, either of them refers to one time-stage only. To them, and perhaps to the grammarians also, it would be equally ludicrous to have a sentence like 50'.

28. "na - hi - kriyaavinirmuktam - vaakyam - asti"
 quoted in Matilal, B.K., (1966), p. 378 (f. n. 2).

29. Jhalakīkar, B., (1893), p. 668.
 Rao, V.S., (1969), p. 13.

50'. trayah - kaalaah - asti-aasiit - bhaviṣyati
three - times - is - was - will be

(Even the respectively - transformation cannot help!)

Thus, they conclude that the inadmissibility of a verbal form in sentence

50 above shows that a sentence need not consist of a verbal form.

However, in their arguments, the logicians do not take note of either physical reality wherein time may be conceived of as a continuum, or of the fact that the reference to three time-stages need not be thought of as relative to some point of reference (in time) within the linguistic system. The occurrence of a verbal form like 'santi' (are) in sentence 50" need not pin it down to a point of reference (in time) which is simultaneous with the event of speaking. It does not necessarily involve a temporal point of reference at all, and, in fact, 50" is perfectly grammatical and acceptable.

50". trayah - kaalaah - santi
three - times - are

(there are three time-stages)

The logicians, in arriving at their conclusion, were also influenced by ontological considerations in addition to the peculiarities of the Sanskrit language (i. e. optional deletion of 'asti' in certain constructions). To them, substance ('dravya') was the repository of different properties i. e. qualities, actions.³⁰ Consider sentences like 51, 52.

30. Chatterjee, S., (1967), p.225: "'dravya' or substance is the substratum of qualities and actions ..."

51. hariḥ - vihagam - pas'yati
 A R
 h. - bird - sees
 (h. sees a bird)
52. caitraḥ - taṇḍulaan - pacati
 A O
 c. - rice - cooks
 (c. cooks rice)

which have different interpretations for logicians and grammarians.

For a logician, the substance - the agent (i. e. hariḥ / caitraḥ) is central in the sentences. In other words, sentences primarily refer to 'hariḥ'³¹ the agent who is "qualified by effort generating the activity of seeing which has a bird as an object" ("vihaga - karmaka - dars'ana-anukuulakṛtimaan hariḥ") and the agent 'caitraḥ'³² who is qualified by the "effort favourable to softening subsisting in rice" ("taṇḍulaniṣṭha-viklityanukuula - kṛtimaan caitraḥ"). But Sanskrit grammarians, or perhaps grammarians in general, would interpret the sentences as if they refer primarily to an action or operation. In other words, to them, the action is central in the sentence. Thus these sentences refer to an action "of seeing which has bird as object and h. as its doer" ('vihaga - karmaka - dars'ana-anukuula - vyaapaaro hari-kartṛkaḥ') and to an action of producing softening in rice which has c. as its doer ("taṇḍulaniṣṭhaḥ viklittijanakaḥ caitraabhinnaśrayakaḥ vyaapaarah")³³ respectively. Thus, Sanskrit grammarians accept the verb as central to the sentence i. e. as a necessary constituent of it. Logicians, on the

31. Matilal, B.K., (1966), pp. 388-389.

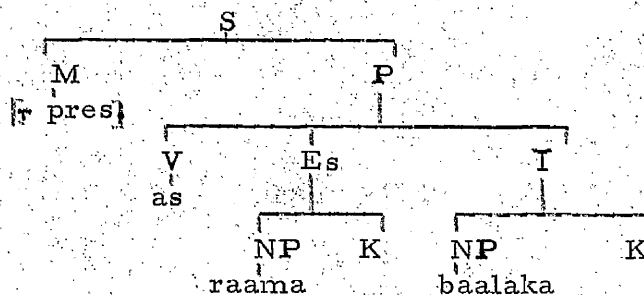
32. Rao, V.S., (1969), pp. 13-19.

33. Rao, V.S., (1969), p. 7 ff.

other hand, consider that a sentence need not necessarily consist of a verb. In a linguistic analysis, the logicians' approach, based partially on ontological consideration and partly on the interpretation of nature and behaviour of 'asti' in a sentence, is not acceptable.

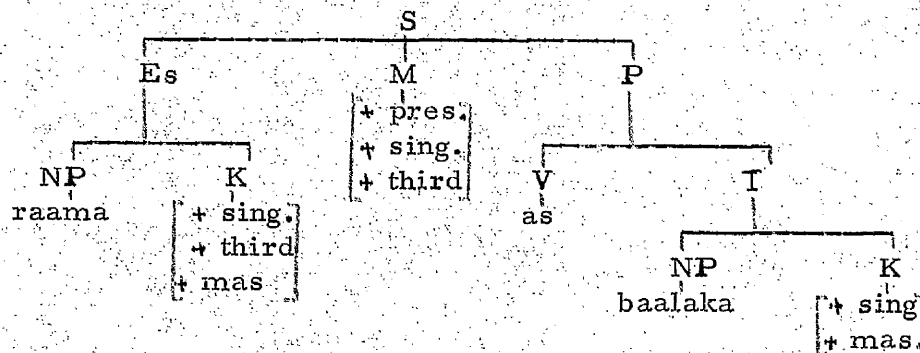
III. 4. However, one problem remains: how to account for the occurrence of 'asti' (is) in a sentence with the optionality of its non-occurrence in the present. Chomsky³⁴ gives base rules to introduce a copula. Thus, there may be subsequent rules to account for its non-occurrence in certain contexts. Consider a sentence like 2 above which has the underlying structure as in figure V.

Figure V



The subjectivalisation-rule selects Es for agreement with the V, T takes on the features of Es and the result is as represented in figure VI.

Figure VI



34. Chomsky, N., (1965), p.107.

The Affix-substitution rule replaces features with affixes and the final form is as in figure VIII via figure VII.

Figure VII

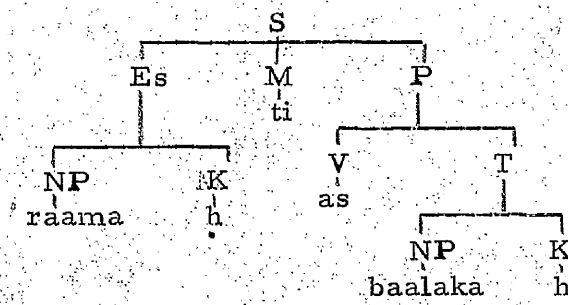
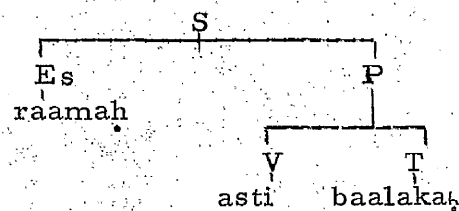
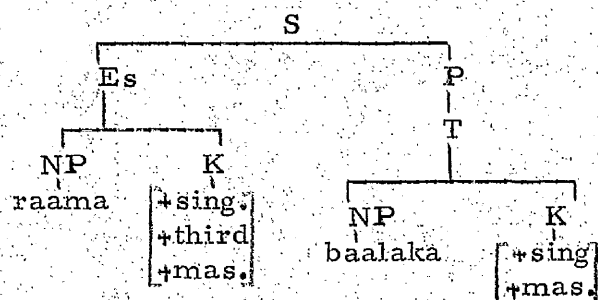


Figure VIII



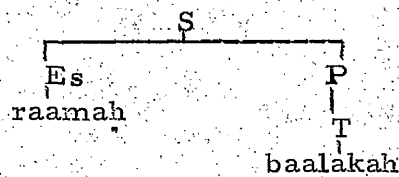
Alternatively, at the stage of figure VI, a copula-deletion rule optionally deletes the V, as the M shows [+present]. Consequently, the result is as represented in figure IX from figure VI.

Figure IX



The affix-substitution rule replaces the features with affixes and the final form (omitting the intervening details) is as represented in figure X.

Figure X



Bach³⁵, however, makes the proposal that 'have' and 'be' need not be

35. Bach, E., (1967), pp.462-485.

introduced in the base-component, but may rather be inserted transformationally. It may be mentioned that, in Sanskrit, there is no verb-form comparable to the 'have' of the English, as sentence 37 above indicates.

For English, Bach gives additional evidence in favour of his position. His rules which insert 'have/be' transformationally also account for reduced attributive clauses³⁶ like "I saw the man on the roof" <="I saw the man who is on the roof". But, in Sanskrit, a proposal for transformational insertion of 'asti' based on simultaneous explication of reduced attributive clause cannot be sustained. A sentence like 53 cannot be interpreted as a reduced attributive form of sentence 54.

53. baalakah - daasam - maarge - apas'yat
 D nom R acc L I
 boy - servant - on road - saw
 (the boy saw the servant on road)

54. baalakah - tam daasam - apas'yat - yah - maarge - aasiit
 boy - him - servant - saw - who - on road - was
 (the boy saw that servant who was on the road)

In other words, it is difficult to assign a node which would dominate only 'daasam' and 'maarge' in sentence 53. 'maarge' in sentence 53 is L dominated by P as is any other case-category in the sentence.

It may be argued that a sentence like 54 is ambiguous unless some word-order is assumed and may be interpreted as 54'.

- 54'. baalakah - yah - maarge - aasiit - tam - daasam -
 boy - who - on road - was - him - servant -
 apas'yat
 saw
 (the boy who was on road, saw that servant)

36. Bach, E., (1967), pp.463-466.

But, with either of interpretations (54/54') the indeterminacy of locational reference remains and the other of the two (i.e. 'baalakah' and 'daasam') cannot be precluded from sharing the same location. I suspect that even if a reduced form of either 54 or 54' is possible, it would not be treated as different from 53 above.

Though, a priori, neither of Bach's and Chomsky's proposals can be rejected, there seems to be no evidence elsewhere within Sanskrit syntax which would justify the transformational insertion of 'asti' as suggested by Bach. Thus, it appears appropriate to treat 'asti' like any other verb and introduce it in the base-component. Secondly, it is not always the case that 'asti' can be optionally deleted in case the node M shows **I** + present **I**. Recall sentence 4' and its derivation (through figures I - IV), and sentence 2 and its derivation (through figures V - IX). It has been mentioned that a rule deletes the V optionally (as in figure IX) as the node M shows **I** + present **I** (figure VI). But, this rule does not operate with the configuration in figure II as a sentence like 4'' is unacceptable.

4''. * raamena - chaatrena
 Es i T i
 by r. - by student

Thus, the V-deletion rule is blocked if the subjectivalisation-rule has not applied (as in sentence 4'.)

Thirdly, in the derivation of some constructions like 46, 47 (as against 45 above), 'asti' must be introduced in the underlying structure and it does not appear to be profitable to have a treatment for V in the derivation of sentences 3-7 above which is different from the one proposed for sentences 4', 3'', 5', 6'' and 46, 47 above. Even if it is argued that it is possible to specify the environment where

'asti' is obligatorily, as opposed to optionally, inserted, it is not clear how it would help, and would add to the complexity of rules without any compensatory advantage elsewhere.

Considering all these arguments, there appears to be no case for not giving a uniform treatment to 'asti' while there is justifiable reason to treat it as a verb.

III. 5. In this section, the status of 'asti' in sentences which are subject to the process of nominalisation, is examined. Consider sentences 55-58". It may be noted that sentence 55 does not allow the optional deletion of 'asti' despite the fact that the matrix S (in figure XV), under the node M, shows I + present I. Sentence 55' is unacceptable.

Sentences 55-58" are complex as the process of nominalisation is related to embedding of S (IV.3.1). Though this study, as mentioned in the beginning, does not account for complex structures, this departure is considered necessary to examine such sentences with 'asti' occurring therein.

55. raamah - gacchan - asti
Es nom VNom nom
r. - going - is

(r. is going)

55'. * raamah - gacchan
r. - going

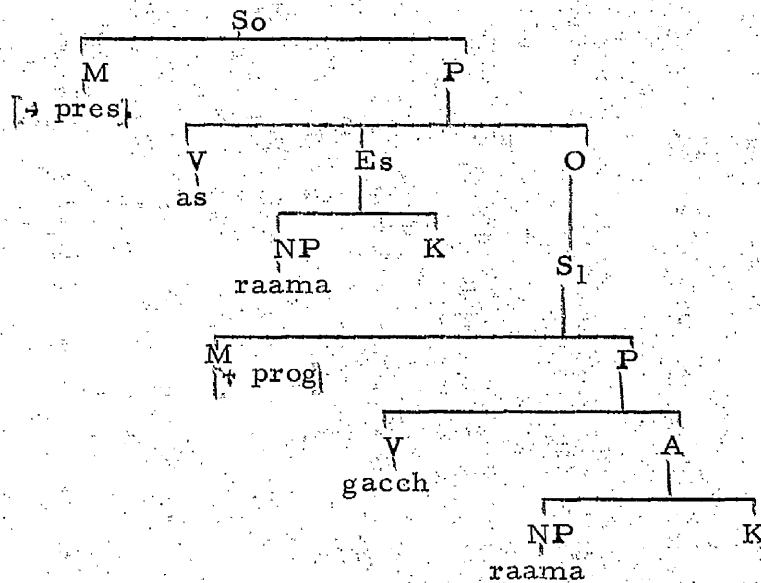
55". raamena - gacchataa - bhuuyate
Es i VNom i
by r. - by going - is become

((it) is become going by r.)

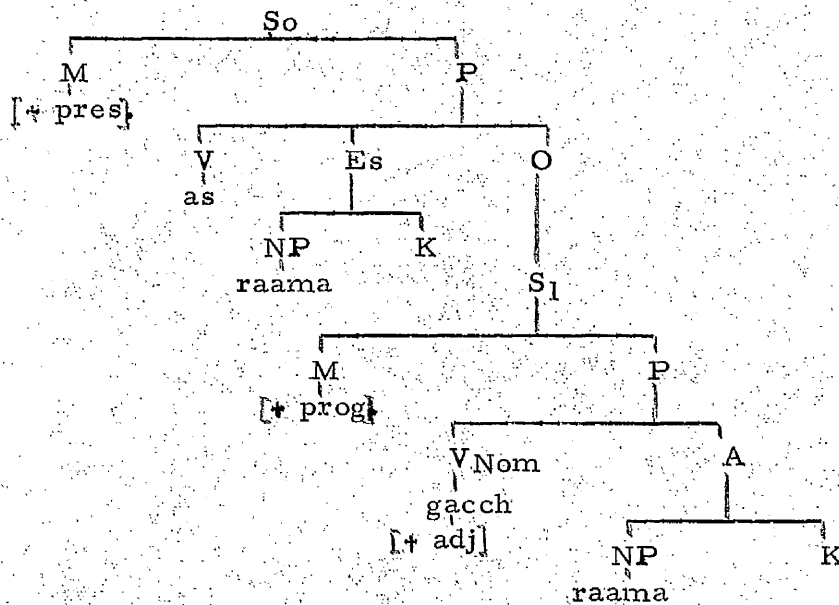
56. baalakah - pustakam - pathitavaan - asti
 Es nom O acc VNom nom
 boy - book - having read - is
 (the boy has read the book)
- 56'. baalakah - pustakam - pathitavaan
 boy - book - having read
 (the boy has read the book)
- 56''. baalakena - pustakam - pathitavataa - bhuuyate
 Es i O acc VNom i
 by boy - book - having read - is become
 ((it) is become having read the book by the boy)
57. baalakena - pustakam - pathitam - asti
 A i Es nom VNom nom
 by boy - book - read - is
- 57'. baalakena - pustakam - pathitam
 by boy - book - read
 both = (the book is having been read by the boy)
- 57''. baalakena - pustakena - pathitena - bhuuyate
 A i Es i VNom i
 by boy - by book - by read - is become
 ((it) is become having been read by the book by the boy)
58. pustakam - pathanaaya - asti
 Es nom VNom d
 book - to read - is
- 58'. pustakam - pathanaaya
 book - to read
 both = (the book is for reading)
- 58''. pustakena - pathanaaya - bhuuyate
 Es i VNom d
 by book - to read - is become
 ((it) is become by the book for reading)

Sentences 55, 55'' have the underlying structure as represented

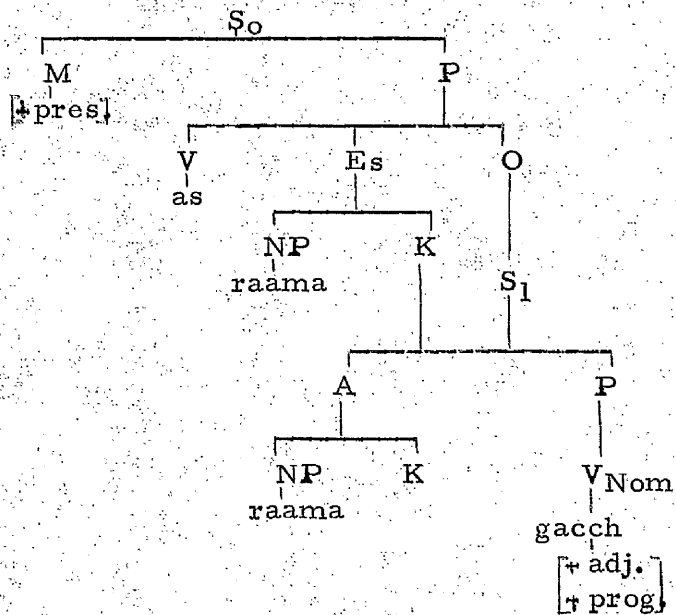
in figure X.

Figure X

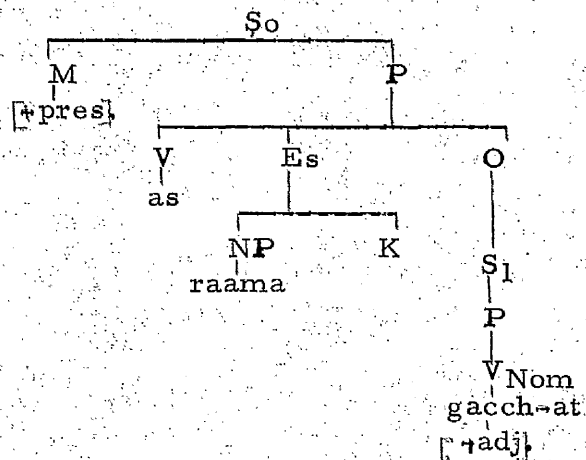
A Nominalisation-rule applies and specifies V as V_{Nom} and attaches the feature **[+ adj]** to V_{Nom} and the result is as represented in figure XI.

Figure XI

The subjectivalisation-rule selects A (in S₁) for agreement with the V_{Nom}. The feature **[+ prog]** under M is attached to the V_{Nom} and the M is deleted. The result is as represented in figure XII.

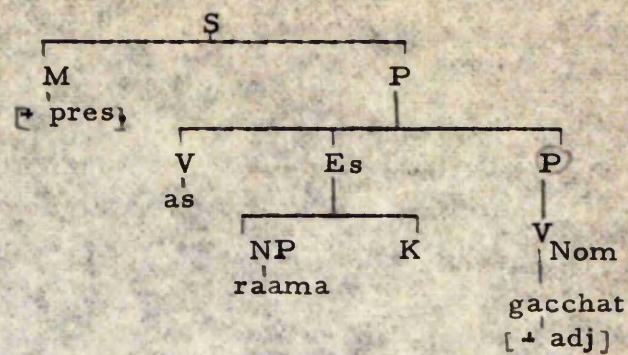
Figure XII

As the V_{Nom} shows the feature $[+prog.]$, the stem-element '-at' is attached to 'gacch' and the feature $[+prog.]$ is deleted. The item under 'A' is deleted under identity. The result is as represented in figure XIII.

Figure XIII

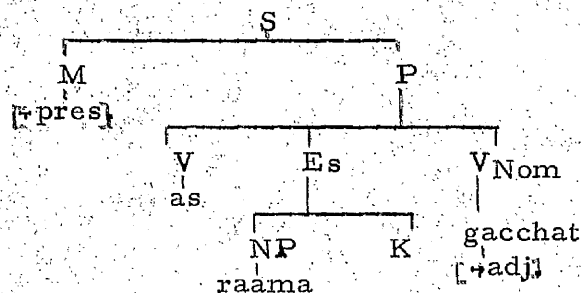
A node-pruning rule³⁷ deletes the node S_1 and a P-raising rule attaches the P to P in the superordinate S. The result is as represented in figure XIV.

37. Ross, J.R., (1967), p. 44; (1969), p. 289.

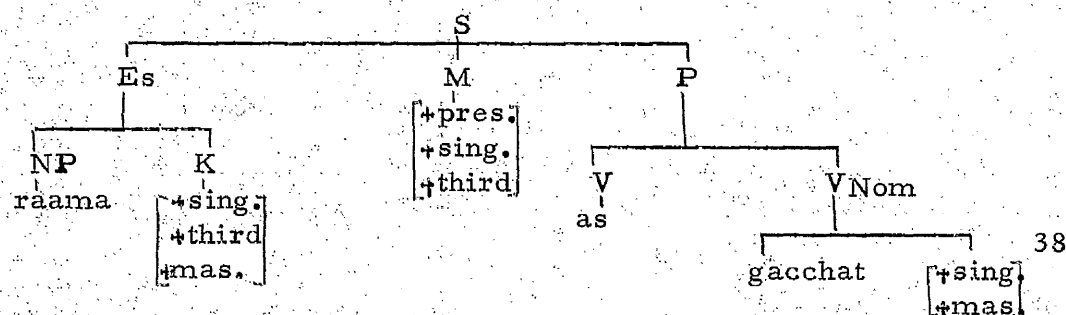
Figure XIV

Now, a rule deletes P whenever it is dominated by itself (i. e. P).

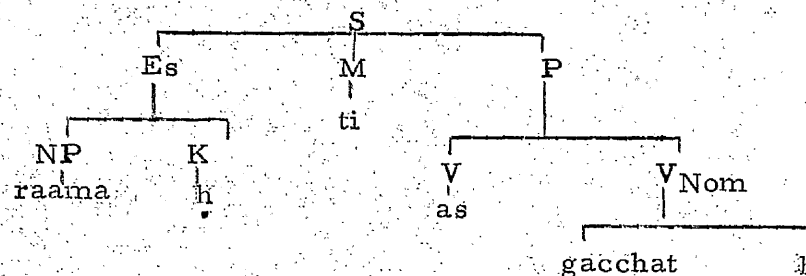
Thus, the node P (encircled) is deleted and the result is as represented in figure XV.

Figure XV

Now the subjectivalisation-rule may apply optionally and select Es for agreement with the V. It may be noted that as the VNom shows [+adj], it takes on the features of Es, whether Es is subjectivalised or not. Es is selected for subjectivalisation and the result is as represented in figure XVI.

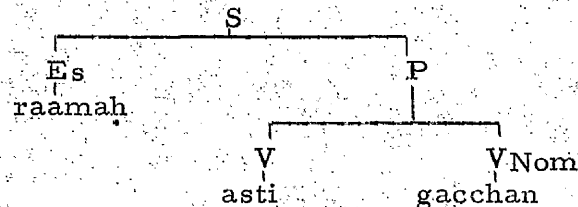
Figure XVI

The Affix-substitution rule replaces the features with affixes and the result is as represented in figure XVII. The final form is as given in figure XVIII.

Figure XVII

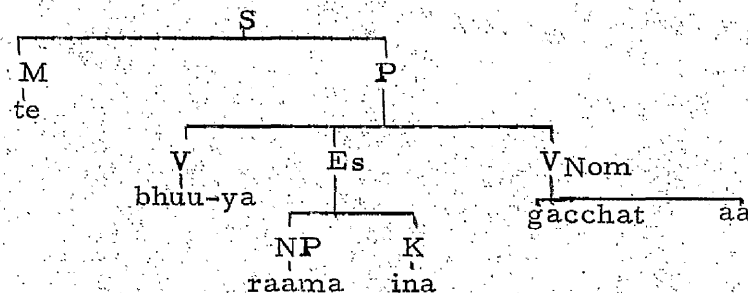
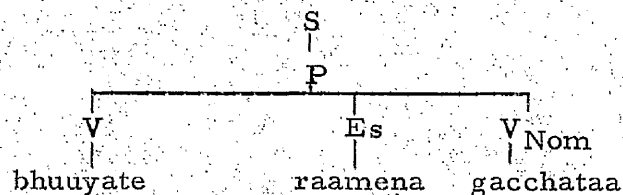
38. An informal notation for representing the specification of the verbal features. Some of these will have been introduced by phrase-structure rule which rewrites a V as CS (e.g. +V) and some would have been introduced transformationally (e.g. the 'at' in the example is a reflex of transformationally introduced feature [+prog]).

phrase structurally

Figure XVIII

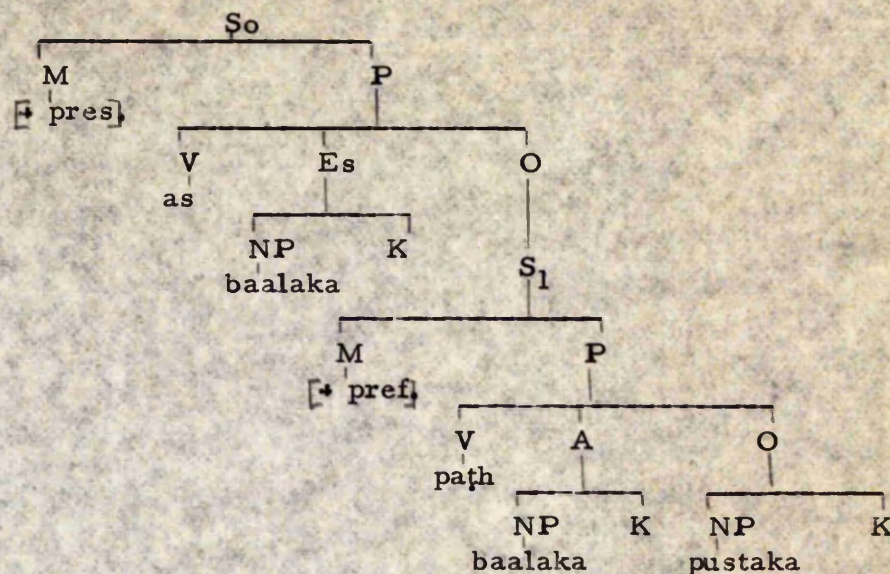
It may be noted that the copula-deletion rule cannot apply at the stage of figure XV (cf. figure IX) as the VNom shows the stem-element 'at' -

Alternatively, at the stage of figure XIV, Es is not selected for subjectivalisation and the process of passivisation without subjectivalisation (II.1.1) operates. The final form is as represented in figure XX (from figure XIV) via figure XIX (omitting intervening details).

Figure XIXFigure XX

Consider, next, sentences 56, 56', 56'' which have the underlying structure as represented in figure XXI.

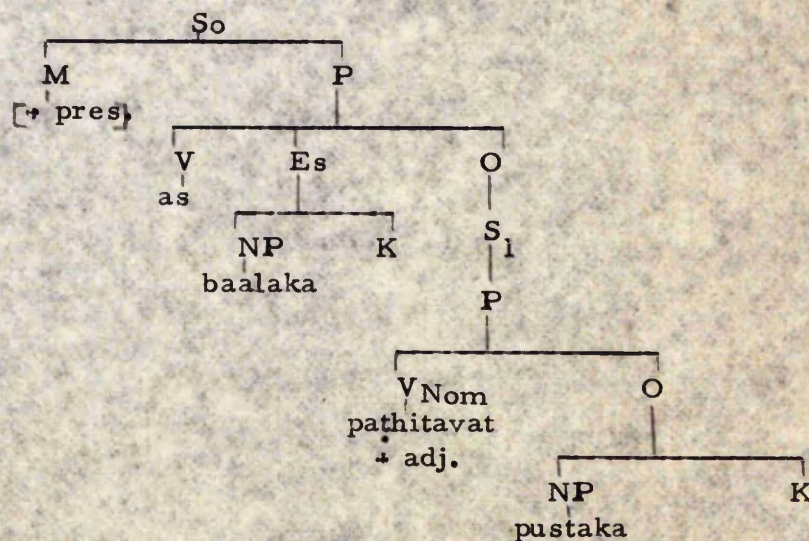
Figure XXI



The Nominalisation-rule applies and specifies V as V_{Nom} , attaches $[+ adj]$ to V_{Nom} ; the Subjectivalisation-rule selects A for agreement with V_{Nom} ; the M-deletion rule attaches $[+ perf.]$ to V_{Nom} and deletes the node M. As the V_{Nom} shows $[+ perf.]$, stem-element 'tavat' is added to 'path' and $[+ perf.]$ is deleted. 'baalakah' under A is deleted under identity. (cf. figures XI, XII, XIII).

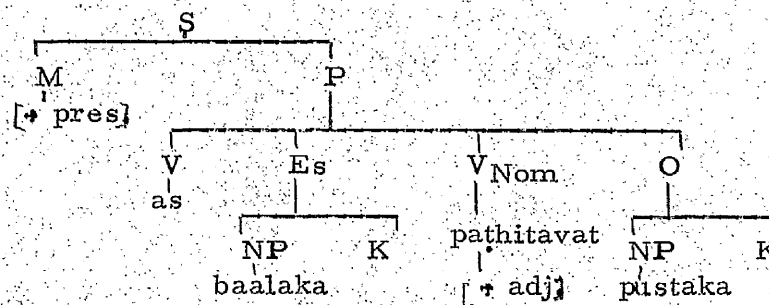
The result is as represented in figure XXII (omitting intervening details).

Figure XXII



The node-pruning rule, the P-raising rule and the P-deletion rule apply (cf. figures XIV, XV) and the result is as represented in figure XXIII (omitting intervening details).

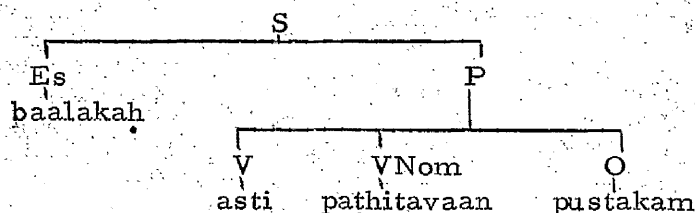
Figure XXIII



The subjectivalisation-rule selects Es for agreement with the V. As mentioned earlier (figure XV), VNom takes on the features of Es, as it shows [+ adj], whether Es is subjectivalised or not. Secondly, it may be noted that even if Es is not selected for agreement with the V, O cannot be subjectivalised (i.e. the process of passivisation (II.1.1) cannot operate). Because, in case the subjectivalisation-rule has operated (in embedded S) before P-raising, no case-category-which originated therein can be subject to the subjectivalisation rule or the process of passivisation with subjectivalisation after P-raising.

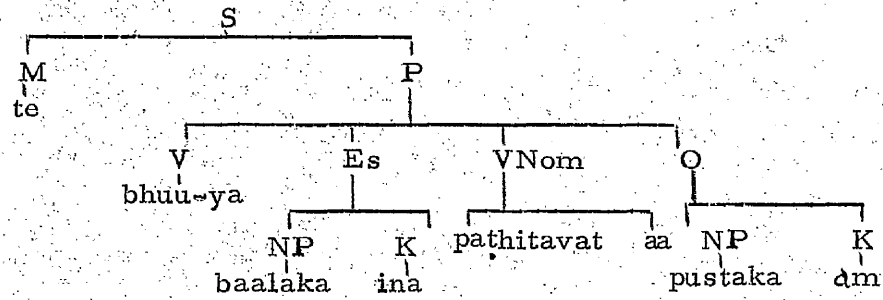
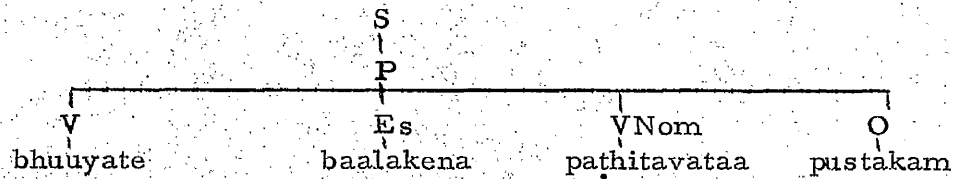
The affix-substitution rule replaces features with affixes and the final form (omitting intervening details) is as represented in figure XXIV (cf. figures XVI, XVII).

Figure XXIV

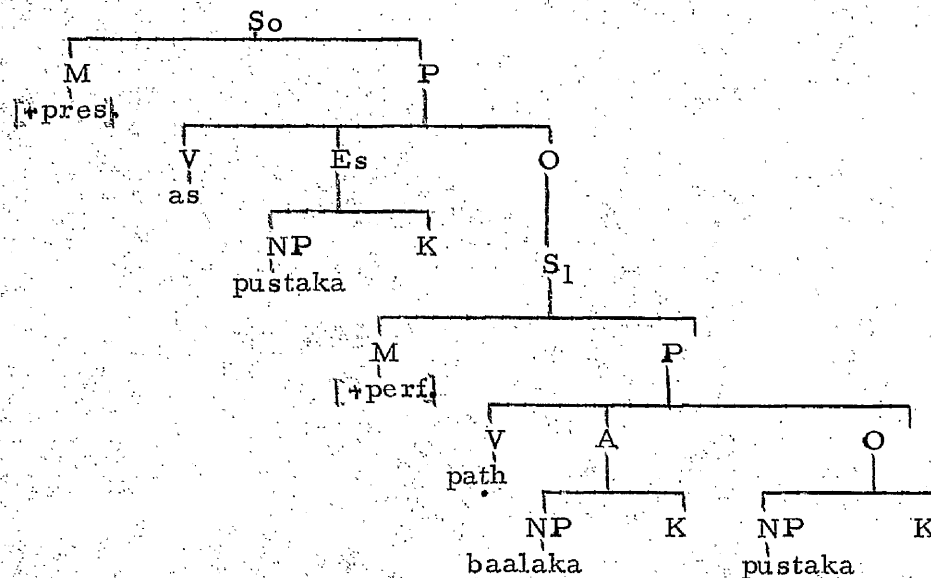


The copula-deletion rule may apply optionally, after the subjectivalisation-rule has applied (cf. figure VI), and thus sentences 56, 56' are derived.

Alternatively, at the stage of figure XXIII, subjectivalisation does not apply and the process of passivisation without subjectivalisation operates. The affix-substitution rule replaces features with affixes and the result is as represented in figure XXV (omitting intervening details). The final form is as given in figure XXVI from which sentence 56'' is obtained. [It may be noted that as the subjectivalisation-rule has not applied, the copula-deletion cannot apply.]

Figure XXVFigure XXVI

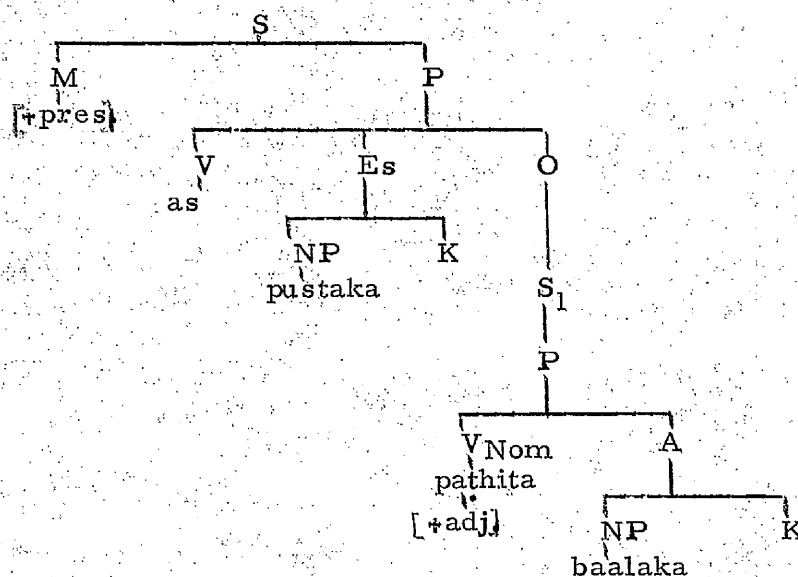
Consider, next, sentences 57, 57', 57'' which have the underlying structure as represented in figure XXVII.

Figure XXVII

The configuration in figure XXVII is similar to that in figure XXI except that Es dominates 'pustaka' and not 'baalaka' (as in figure XXI). The Nominalisation-rule applies and attaches [+adj.] to VNom in embedded S, the Subjectivisation-rule selects O for agreement with the VNom, the M-deletion rule attaches [+perf.] to VNom in the embedded S and

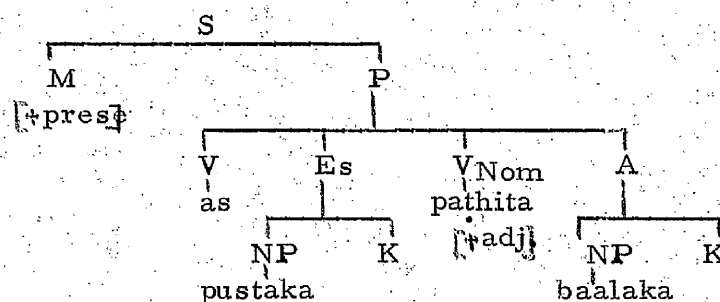
deletes the node M. As the VNom shows [+perf.], the stem-element 'ta' is added to 'path' in the embedded S and [+perf.] is deleted. 'Pustaka' in the embedded S is deleted under identity. The result is as represented in figure XXVIII (omitting intervening details).

Figure XXVIII

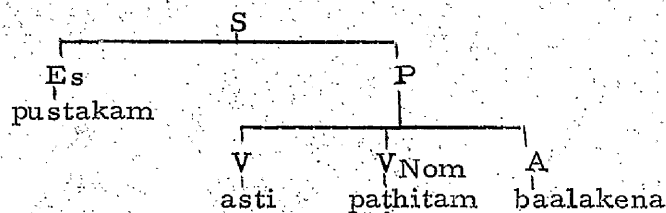


The node-pruning rule, the P-raising rule and the P-deletion rule apply (cf. figures XIV, XV), and the result (omitting intervening details) is as represented in figure XXIX.

Figure XXIX



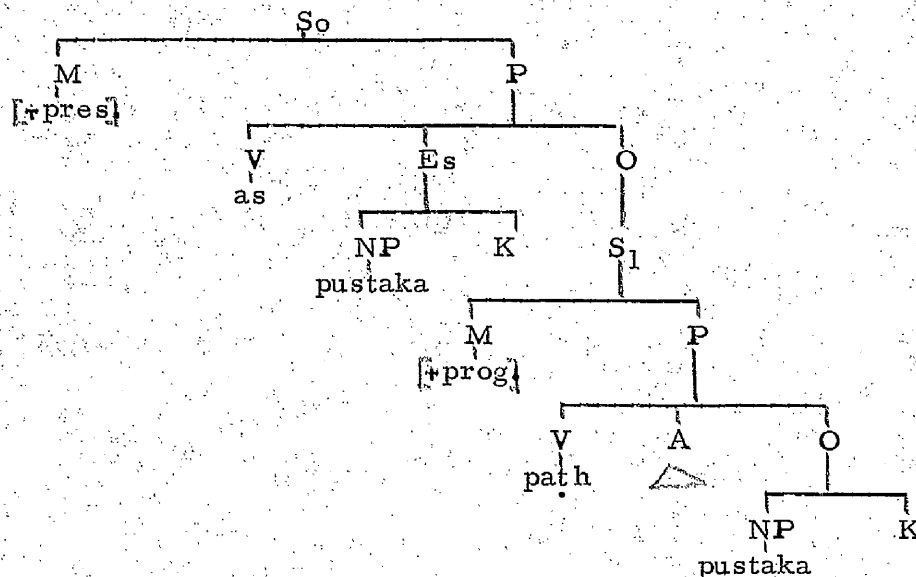
Subjectivalisation may or may not select Es for agreement with the V. But, as mentioned earlier (figure XXIV), A cannot be subjectivalised. Es is selected for subjectivalisation, the affix-substitution rule replaces features with affixes. The final form is as represented in figure XXX (omitting intervening details).

Figure XXX

The copula-deletion may apply optionally after the subjectivalisation-rule has applied and thus sentences 57, 57' are derived.

Alternatively, if at the stage of figure XXIX Es is not selected for subjectivalisation, the process of passivisation without subjectivalisation operates and through a derivation similar to that in figures XXV, XXVI, sentence 57'' is derived.

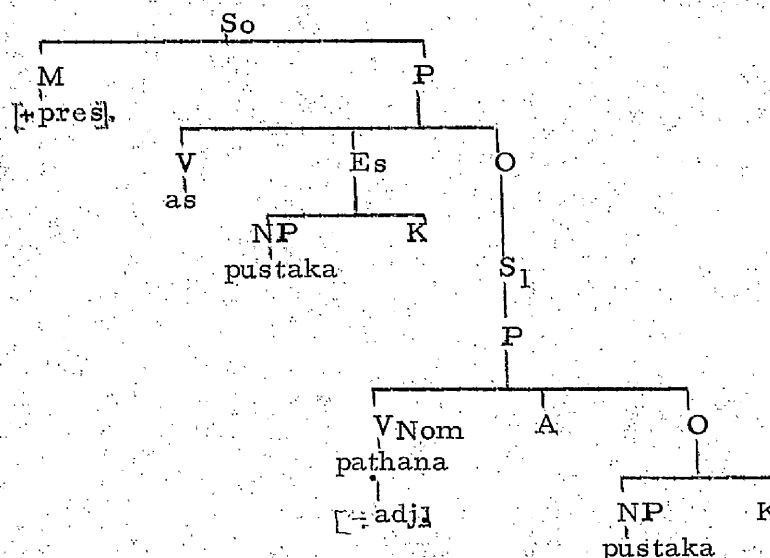
Consider, next, sentences 58, 58', 58'' which have the underlying structure as in figure XXXI.

Figure XXXI

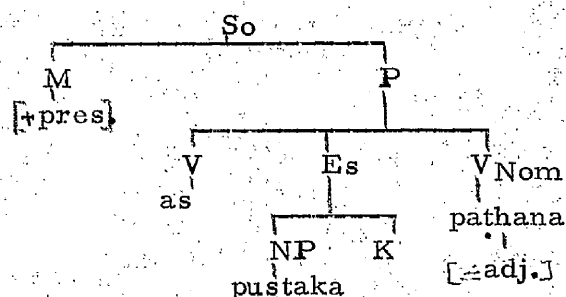
The Nominalisation-rule specifies V as V_{Nom} and the Subjectivalisation-rule, being optional, does not apply.

Whenever subjectivalisation does not operate, the M node is deleted. The stem-element -'ana' is added to 'path' in the embedded S.

The result (omitting intervening details) is as represented in figure XXXII.

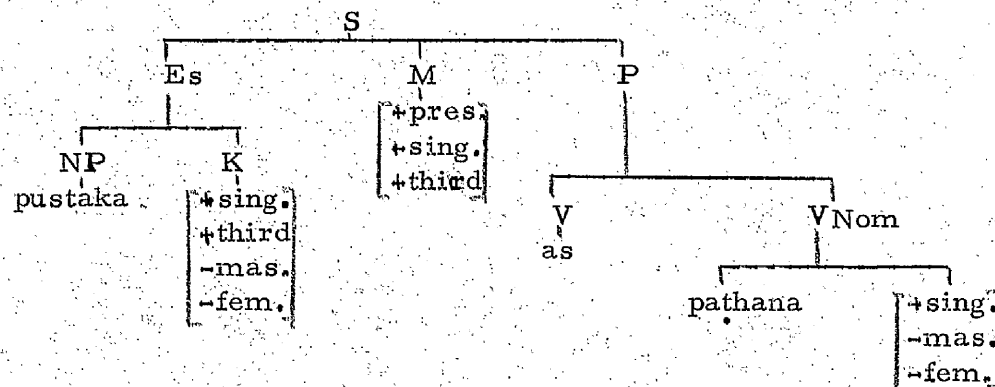
Figure XXXII

'pustaka' in S_1 is deleted under identity, the dummy A is deleted, the node-pruning rule deletes the node S_1 , the P-raising-rule and the P-deletion rule apply and the result is as in figure XXXIII (omitting intervening details).

Figure XXXIII

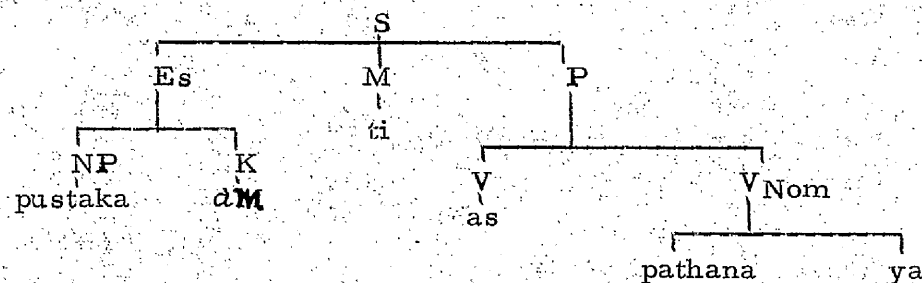
The subjectivalisation-rule selects Es for agreement with V. It may be noted that the V_{Nom} shows [-adj.], and hence it cannot take on the features of any case-category. The result is as in figure XXXIV.

Figure XXXIV



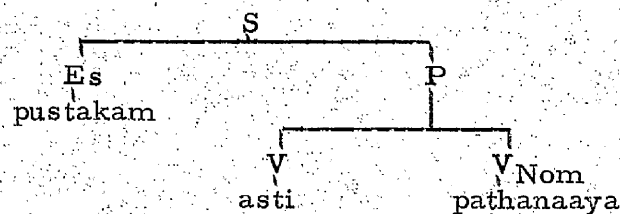
The affix-substitution rule replaces the features with affixes. [A morpho-phonemic rule attaches d(ative) to 'pathana' under VNom.] The result is as represented in figure XXXV.

Figure XXXV



The final form is as in figure XXXVI

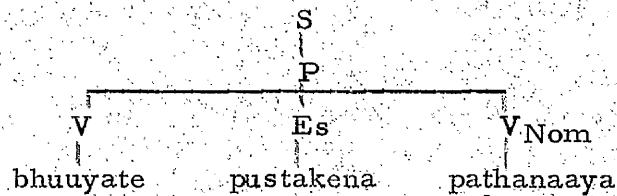
Figure XXXVI



The copula-deletion rule may delete the V after the subjectivatisation rule has applied. Thus sentences 58, 58' are derived.

Alternatively, if at the stage of figure XXXIII, Es is not subjectivatised, the process of passivisation without subjectivatisation operates and the final form is as represented in figure XXXVII (omitting irrelevant details).

Figure XXXVII



Thus, sentence 58'' is derived from figure XXXVII.

III. 6. The rules that operate in the derivation of the above sentences are as follow:

1. A Nominalisation rule specifies V as V_{Nom} and attaches [₊ adj.] to the item under V_{Nom}.
2. The Subjectivalisation-rule applies optionally and selects a case-category for agreement with V/V_{Nom}. However, on the last cycle the subjectivalisation-rule cannot select any case-category which has originated in an embedded sentence. But, V_{Nom} may be subjectivalised in case the subjectivalisation-rule has not applied to the configuration wherein V_{Nom} originated.
3. A M-deletion rule operates as follows:
 - (i) if rule 2 has applied, the feature under M is taken on by the V_{Nom} and the node M is deleted
 - (ii) if rule 2 does not operate, the feature under M is not taken on by V_{Nom} and the node M is deleted.
4. A copula-deletion rule applies on the condition that subjectivalisation has taken place, and deletes optionally
 - (i) the copula under V if M shows [₊ pres.] and if there is a V_{Nom} also it does not show the stem-element 'at'.
 - (ii) the copula under V_{Nom} if it shows [₊ prog.].

5. A P-raising rule attaches P in the embedded S to the P in the superordinate S.³⁹
6. A P-deletion rule deletes the node P if it is dominated by itself (i.e. P).³⁹
7. The affix-substitution rule replaces the features with affixes.

39. These rules may be dispensed with, in case the scope of the node-pruning rule is extended to delete the case-category dominating S₀ as well. (cf. Kiparsky, P., J.F. Staal, (1969), p. 101 (figure 13)).

CHAPTER IV

IV.1. This chapter deals with 'Genitive'¹ which refers to a surface-phenomenon rather than to a case-category in the Fillmorian sense. As explained later in this chapter, the Genitive is derived from so many diverse sources that it is considered appropriate to discuss them together with reference to their surface-form. By 'Genitive' is meant an NP with the marker 'sya' (i. e. 'genitive') and its variants². Thus the Genitives i. e. NP's underlined in sentences 1-4 indicate the main range of different realisations of 'sya' (i. e. genitive).

1. baalaka-sya - pustakam
 G g
 of boy - book

(boy is book)

(the NP 'baalaka' is [+ masculine] and ends in a vowel)

2. baalikaa-yaah - sundarataa
 G g
 of girl - beauty

(girl's beauty)

(the NP 'baalikaa' is [+ feminine] and ends in a vowel)

3. madhu-nah - madhurataa
 G g
 of honey - sweetness

(honey's sweetness)

1. G(enitive) refers to constructions with g(enitive) inflexion.
2. The marker 'sya' is a cover term for its variant forms, occurrence of which depends on whether the NP has the feature [+ mas.] / [+ fem.] / [-mas.] and whether it ends in a vowel or consonant.
- The terms vowel and consonant are used as referring to phonological units and as defined in Sanskrit texts.

(the NP 'madhu' is $\begin{bmatrix} -mas. \\ -fem. \end{bmatrix}$ and ends in a vowel).

4. $\frac{\text{vidyarthin-ah}}{\text{G} \quad \text{g}} \quad \begin{matrix} - \\ - \end{matrix} \quad \begin{matrix} \text{aagamanam} \\ \text{coming} \end{matrix}$
 of student

(the NP 'vidyarthin' is $\begin{bmatrix} +masculine \\ \end{bmatrix}$ and ends in a consonant).

IV.2. The later Sanskrit commentators³ did not assign a case-category to Genitive; though they included it in the section dealing with the 'kaaraka's. Paanini's governing rule 'ṣaṣṭhī śeṣe' (sixth (case-affix i. e. genitive) in the rest),⁴ has led to controversy among the Sanskrit commentators and grammarians with regard to its interpretation. In the first instance, they have tried to show that "ṣaṣṭhī" indicates a 'kaaraka'-relation as in 'raajñah - puruṣah' (king's man).⁵ Then,

3. Bhaṭṭojidiikṣita (1700 A.D.)

4. Paanini, II.3.50.

5. Iyer, K.A.S., (1969) pp. 324-325: "the relation of master and servant in the expression 'raajñah - puruṣah': the king's man, implies a previous relation of action and accessory or rather of donor and recipient between the two [It is difficult to accept this assignment of 'donor-recipient' property to NP's 'raajñah' and 'puruṣah' as instrumental in establishing a kaaraka-relation. In a sentence like 'raajaa - puruṣam - aadis'ati' (king-to man - orders), the same relation of master-servant (or master-recipient) obtains, but the kaaraka-relation is of 'kartaa-karma' (in relation to the verb addis'ati)_{bsk} and that is how the relation of master and servant also becomes a kind of 'kaaraka' indirectly. The previous relation of master and servant is the cause and the later relation of master and recipient is the result. When the previous special relation is not meant to be conveyed as shown by the fact that the action on which it was based is not mentioned at all, a very general relation is all that remains and that is what is meant by 's'eṣa'... the relations expressed by the sixth case affix are those of part-whole and procreator and offspring and are the result of previous actions and not mentioned in the sentences, actions in which these objects were accessories. That previous status lingers somewhat in the present status and that is why the present status which is 's'eṣa' is looked upon as a kind of 'kaaraka' though its relation with the action expressed in the sentence is rather remote" ... "though it is not a 'kaaraka'-relation, it is preceded by or rather it involves a 'kaaraka'-relation."

they try to interpret the term 's'eṣe'⁵ also as a 'kaaraka'. So far so good. But the difficulty creeps in when they interpret the one and try to bring the other in conformity with it. Thus they stretch their imagination to show that the relation between master-servant or part-whole is a kaaraka-relation and is 's'eṣa' as well. It appears that this is where they have gone wrong. Their effort to show 'raajñah-puruṣah' (king's-man) as denoting a 'kaaraka'-relation (f.n. 5) becomes roundabout and definitely comes up at a level different from the one that would be assigned to 'kaaraka's by Paanini. Bhartṛhari has gone to the extent of postulating a 's'eṣa - kaaraka' in structures like 'raajñah - puruṣah' and as a result of it his discussion tends to be metaphysical.⁶ Thus, there appears to be a fair amount of indeterminacy with regard to the sphere and interpretation of the Genitive.⁷ In so far as the transformational model is concerned, it may be safely claimed that the Genitive

6. Iyer, K. A. S., (1969), p. 529:

"tathaa - hi - raajñah - puruṣah, vrkṣasya - s'aakhaa, pas'oh-paadaḥ, pituḥ - putrah - ityaadau - aa s'ruuyamaanakriyaaviṣaye - svasvaami - bhaavaavayavaavayavibhavaajanyajanaka - bhaavaadau - sambhave - dadaatisthiṭi janmaadikriyaaprabhaavite - puurvabhaavikaarakatvam - uttaraavasthaayaam - api - anugatamiti - bhavatyeva - s'eṣah - kaarakam" ... "kriyaakaarakaapurvakah - ityanena - kaarakatvam - vyaacaste - s'eṣasya."

7. Vaamana-Jayaaditya, (1965) vol. II pp. 209-11:

"karmaadibhyah - anyah - praatipadikaarthavyatiriktah - svasvaami bhaavaadisambandhaḥ - s'eṣah - tatra - ṣaṣṭhii - vibhaktih - bhavati" ... whatever is not covered by the rules governing kaaraka-relations and the rule II. 3. 4. 6, is s'eṣa and takes genitive.

cf. Patañjali - (ed.) Kielhorn, F., (1892) vol. I, p. 463

cf. Paanini - (ed.) Vasu, S. C., (1891) vol. I, p. 296

cf. Speijer, J. S., (1886), p. 82 (f.n. 1): "kaas' on p. 1. 1. 49

'bahavah - hi - ṣaṣṭhyarthaah - svasvaamyantaras'amiipasam-uuhavikaaraavayavaadyaah" - Paanini seems to have not sharply defined the genitive's sphere of employment, at least if we explain his Suutra (rule) 2. 3. 50 'ṣaṣṭhii-sese' with the

/contd.

in Sanskrit has not been discussed in any detail. Kiparsky and Staal have discussed the 'kaaraka's and mentioned the Genitive in the list. But they also have left it without any discussion.⁸

IV. 3. The Genitive in Sanskrit (i.e., NP with a marker 'sya', f.n.1) can be related to four types of structures as in sentences 5'-8', 9, 9'.

(i) In sentences 5'-8' the Genitive is a mere alternative surface-realisation of a case-category normally realised by different morphological forms, as compared with sentences 5-8.

5. sa - priyaam - smarati
D R acc
he - beloved - remembers

5'. sa - priyaayaah - smarati
D R g
he - of beloved - remembers

both = (he remembers his beloved)

6. chaatrah - guroh - caranau - bhajate
A G g O acc
student - of teacher - feet - worships

7. (contd.) kaas'ikaa, as meaning "in all other instances (namely if none of the other cases taught (2.3.1-49) be available), one should use the sixth case". But then it is strange, Paanini has not said inversely 's'ese - saṣṭhī' (cf. his constant use 1.4.7; 1.4.108, 2.2.23; 3.3.151; 7.2.90). Now Patañjali gives a somewhat different explication ... "karmaadiinaam - avivakṣaa - s'esaḥ" : "the sixth case is required, if the categories object and the rest are not to be distinctly expressed" but tacitly implied". cf. Bhattojidiikṣita (ed.) Roy, S. (1920), pp. 70-71: "s'esa is 'other than what is said', 'what remains to discuss' etc. The 'kaaraka's and the sense of a 'prātipadika' have been discussed. Hence such relations as that of the possessor and the possessed yet remain to speak of. These relations will be expressed by the 'saṣṭhī-vibhakti'".

8. Kiparsky, P. and J.F. Staal, (1969) pp. 83-117.

- 6¹. chaatraḥ - guroḥ - caranāyoh - bhajate
 A G g O g
 student - of teacher - of feet - worships

both = (the student worships his teacher's feet)

7. baalakāḥ - phalāḥ - tṛpyati
 D I i
 boy - with fruits - feels contentment

- 7¹. baalakāḥ - phalaanaam - tṛpyati
 D I g
 boy - of fruits - feels contentment

both = (the boy feels contentment of fruits)

8. dyuutakaraḥ - s'atam - pratidiivyaṭi
 A O acc
 gambler - hundred - gambles

- 8¹. dyuutakaraḥ - s'atasya - pratidiivyaṭi
 A O g
 gambler - of hundred - gambles

both = (the gambler gambles hundred (pieces of money))

- (ii) In sentence 9, the genitive is derived through the process of nominalisation⁹ from an underlying case-category, thus 9 is transformationally related to sentence 9¹.

-
9. Nominalisation as a process is related to sentence-embedding (excluding relative structures), the embedded S being dominated by a case-category. The process of nominalisation in regard to 'NP-asti-NP' sentences has been analysed in III. 5. It may be argued that sentences like 9 have a claim to be included in the same chapter (i.e. III) But, as they contain Genitives as well, they are better taken up in this chapter. I have not assigned a case-category to 'racakah' (writer) in sentence 9. It is proposed that V_{Nom} need not be assigned a case-category in NP - asti - NP sentences or elsewhere.

9. lekhasya - racakah - guruh - aasiit
 F g V_{Nom} A
 of article - writer - teacher - was
 (the teacher was the writer of the article)

- 9^t. lekham - aracayat - guruh
 F_{acc} V A
 article - wrote - teacher
 (the teacher wrote the article)

(iii-iv) In sentences 10-11, the Genitive is related to what Fillmore would call alienable and inalienable possession.¹⁰ Following Fillmore, the Genitive in sentence 11 may be developed according to the schema $NP \rightarrow N(S)$ ¹¹. But, in sentence 10, the Genitive would not be developed in this way. Discussion of structures like 10, 11 is taken up later

(IV.3.2).

10. tasyaah - vadanam - sundaram - asti
 G g E nom T nom
 her - face - beautiful - is
 (her face is beautiful)

11. tasyaah - bhavanam - sundaram - asti
 G g E nom T nom
 her - house - beautiful - is
 (her house is beautiful)

Structures of the type exemplified in sentences 5^t-8^t will not be discussed in this section. These relate to surface-inflexional realisations of the same case-category and can be handled by appropriate affix-assigning rules. The remaining of the above-mentioned structures (i.e. 9-11) will be discussed below.

-
10. Fillmore, C.J., (1968a), pp. 61-81. cf. Chomsky, N, (1970a), pp. 200ff.
 11. Fillmore, C.J., (1968a), p. 66.

IV.3.1. As mentioned above, sentences like 9 are related to the process of nominalisation and the Genitive in such structures is derived from an underlying case-category transformationally. There have been arguments,¹² following Chomsky,¹³ that as the transformational derivation of nominals does not operate systematically in the case of derived and gerundive nominals, the Genitive in both structures cannot be treated in the same way. In other words, the Genitive of gerundive nominals needs to be derived in a different way from all others. But in Sanskrit (f.n.13), the process of nominalisation can be transformationally related to underlying structures in a systematic manner. A sentence containing a nominal would be derived from a deep-structure involving specific case-categories, and the Genitive in the former would derive ultimately from a case on the verb in the underlying structure. Thus, a good number of Genitives (in relation to nominals which are morphologically related to verbs in underlying structures) can be traced back to cases. In sentence 9' above, the Genitive 'lekhasya' (of article) is the alternative realisation of the case-category F (in sentence 9), conditioned by the VNom 'racakah' (writer).

12. Stockwell, R. P. et al., (1968), pp. 530-536, 712.

13. Chomsky, N., (1970a), pp. 184-221. Chomsky makes a distinction between two types of nominalisation gerundive nominal and derived nominal. (e.g. J.'s refusing the offer vs. J's refusal of the offer) which differ in respect of (i) "productivity of the process in question", (ii) 'the generality of the relation between the nominal and the associative proposition', (iii) and 'the internal structure of the nominal phrase'. The dichotomy is not of much consequence in so far as nominalisation in Sanskrit is concerned.

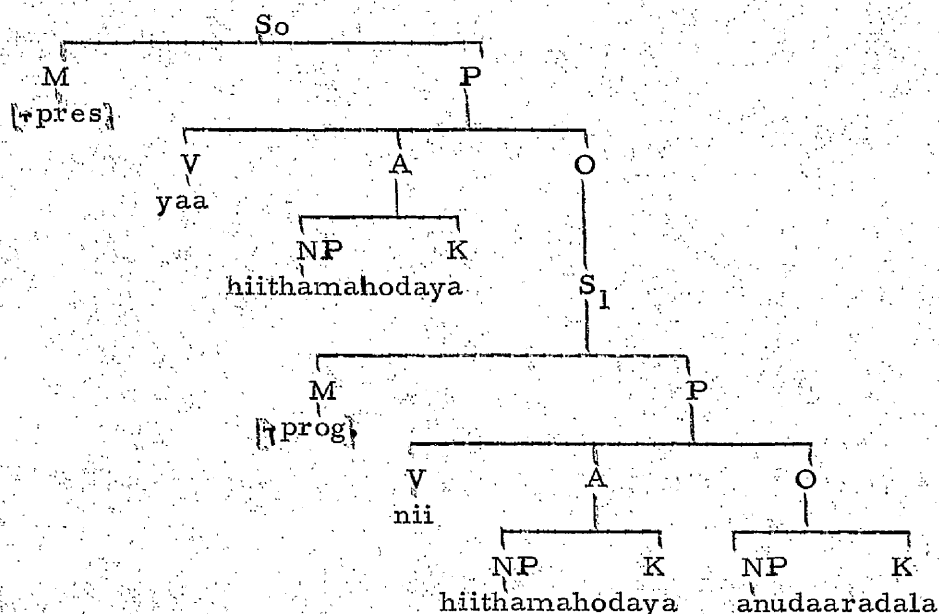
IV.3.1.1. In this section, the structures exemplified in sentence 9 (or in other words structures containing Genitives and related to the process of nominalisation) are described through their derivation. Sentences 12, 13 are described in detail. Sentences 14, 15 are described with respect to those details which differ from that of 12, 13. Sentences 12'-15' are alternative realisations due to the non-operation of the subjectivalisation-rule which has been referred to earlier and hence need not be taken up again.

12. anudaaradalasya - netaa - hiithamahodayah - yaati
 G g VNom A nom
 of conservative party - leader - Mr. Heath - goes
 (Mr. Heath, the leader of the conservative party, goes)
- 12'. anudaaradalasya - netraa - hiithamahodayena - yaayate
 G g VNom i A i
 of conservative party - by leader - by Mr. Heath - is gone
 ((it) is gone by Mr. Heath the leader of the conservative party)
13. prabhuh - sevakasya / sevakena - as'vasya - nagaraaya /
 A nom G g i G g GO d
 master - of servant/by servant - of horse - for city
 nagaram - nayanam - aadis'ati
 GO acc VNom acc
 to city - leading - orders
 (the master orders the leading of the horse by the servant
 to the city)
- 13'. prabhunaa - sevakasya / sevakena - as'vasya - nagaraaya
 A i G g i G g GO g
 by master - of servant / by servant - of horse - for city
 /nagaram - nayanam - aadis'yate
 GO acc VNom nom
 to city - leading - is ordered
 (the leading of the horse to the city by the servant is ordered
 by the master)

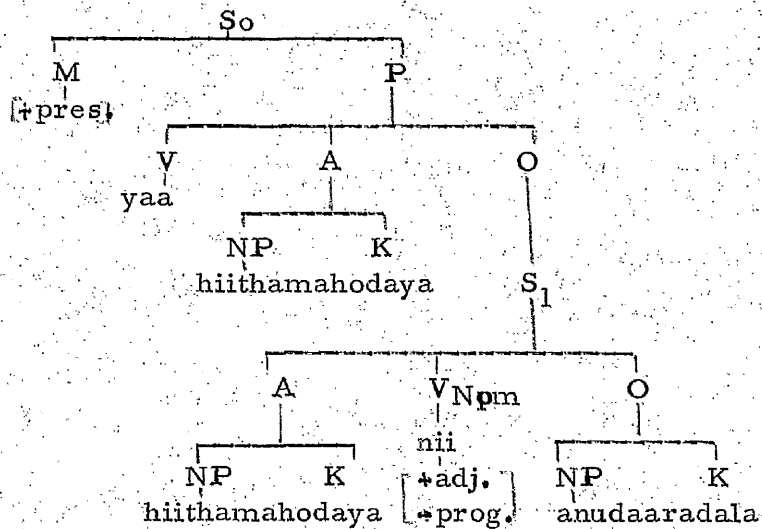
14. pathikasya - jalasya - pipaasaa - avardhata
 G g G g VNom nom
 of traveller - of water - desire to drink - increased
 (the desire of the traveller to drink water increased)
- 14'. pathikasya - jalasya - pipaasayaa - avardhyata
 G g G g VNom i
 of traveller - of water - by desire to drink - was increased
 ((it) was increased by the desire of the traveller to drink water)
15. baalakasya - rogasya / rogena - rujaa - vardhate
 G g G g i VNom nom
 of boy - of disease/by disease - torment - increases
 (the torment of the boy by the disease increases)
- 15'. baalakasya - rogasya/rogena - rujayaa - vardhyate
 G g G g i VNom i
 of boy - of disease/by disease - by torment - is increased
 ((it) is increased by the torment of the boy by the disease)

Sentences 12, 12' have the underlying structure as in figure I.

Figure I

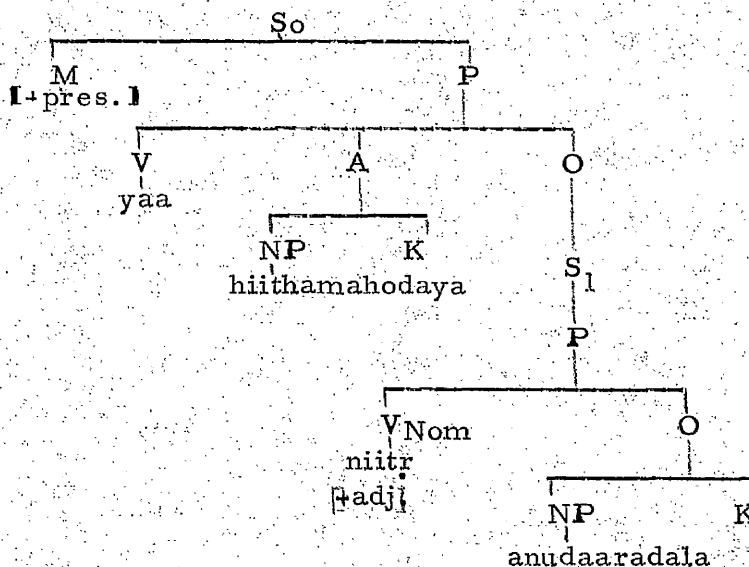


The nominalisation-rule specifies V as VNom and attaches the feature [+adj.] to VNom in S. A in S1 is subjectivalised. The feature [+prog.] is attached to VNom and the node M is deleted. The result is as represented in figure II (omitting irrelevant details).

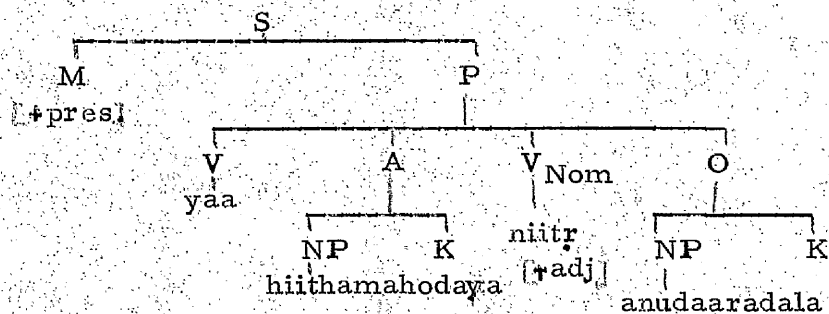
Figure II

As the VNom in S₁ shows [+prog.] the stem-element 'tr' is added to the item under the VNom and the feature [+prog.] is deleted. The item under A in S₁ is deleted under identity with the superordinate NP.

The result is as represented in figure III (omitting irrelevant details).

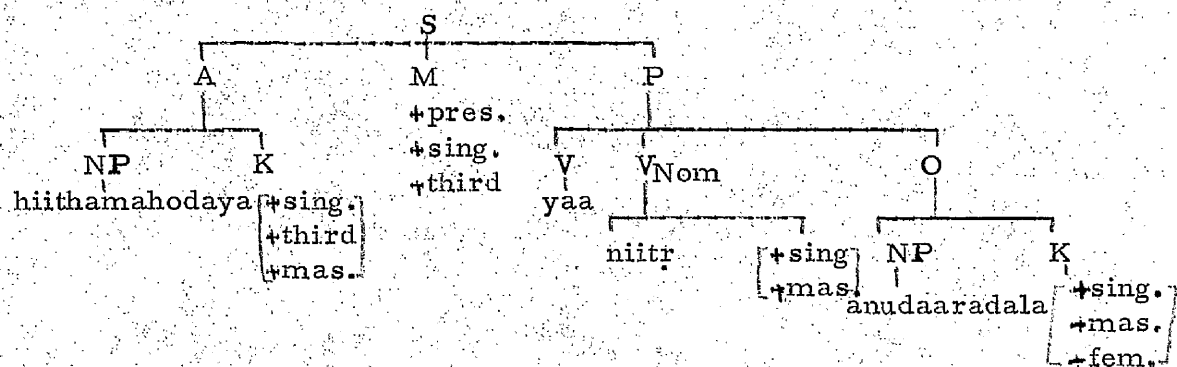
Figure III

The node-pruning rule, the P-raising rule and the P-deletion rule apply and the result (omitting intervening details) is as represented in figure IV.

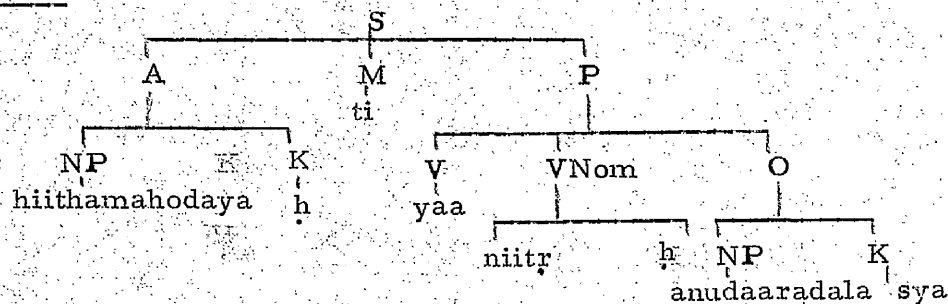
Figure IV

The subjectivisation-rule may or maynot select 'A' for agreement with the V, but the VNom will take on the features as it shows [+adj.].

Secondly, even if A is not selected for subjectivisation the process of passivisation cannot operate and O cannot be selected for agreement with the V (see figure XXIV, III.5). A is selected for subjectivisation and the result is as represented in figure V.

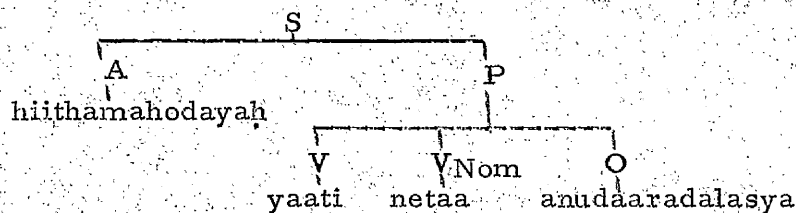
Figure V

The affix-substitution rule replaces the features with affixes and the result is as in figure VI (a morphophonemic rule attaches g(enitive) to O(obligatorily).

Figure VI

The final form is as represented in figure VII.

Figure VII

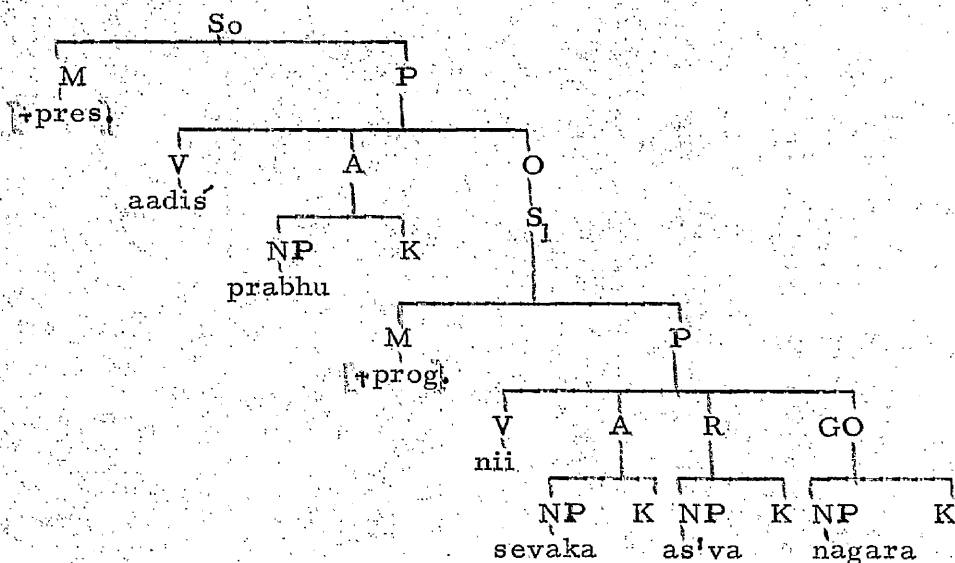


Thus, sentence 12 is derived from figure VII.

Alternatively, at the stage of figure IV, if A is not selected for subjectivatisation the process of passivisation without subjectivatisation operates (see II.1.1) and sentence 12' is derived.

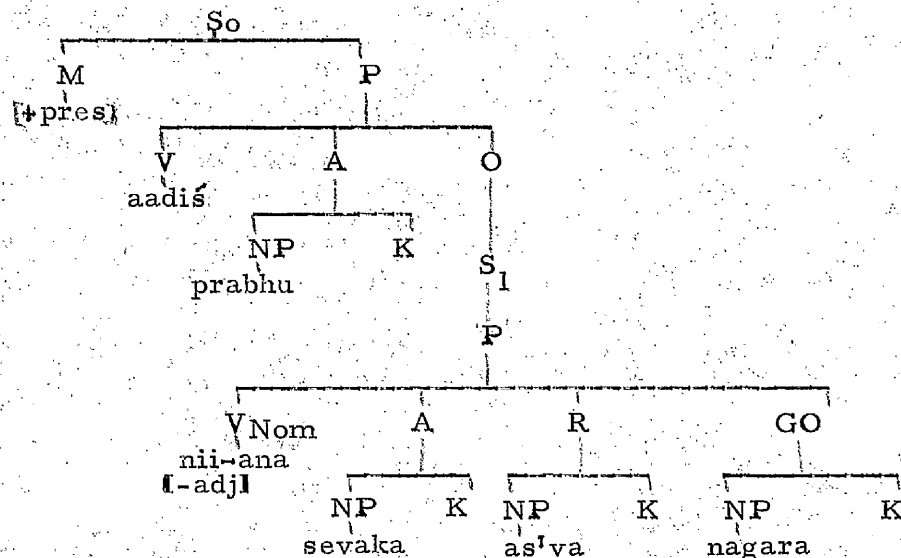
Consider, next, sentences 13, 13' which have the underlying structure as in figure VIII.

Figure VIII



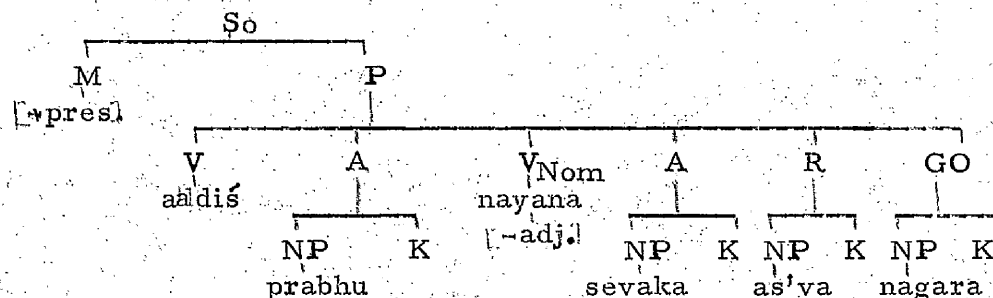
The Nominalisation-rule specifies V as V_{Nom} and attaches the feature [-adj.1] to V_{Nom} (in S₁), the Subjectivatisation-rule does not operate, the M-deletion rule deletes the node M, the stem-element -'ana' is added to the item under V_{Nom}. The result is as represented in figure IX (omitting intervening details).

Figure IX



The node-pruning rule deletes the node S_1 , the P-raising rule and the P-deletion rule apply and the result is as represented in figure X (omitting intervening details)

Figure X



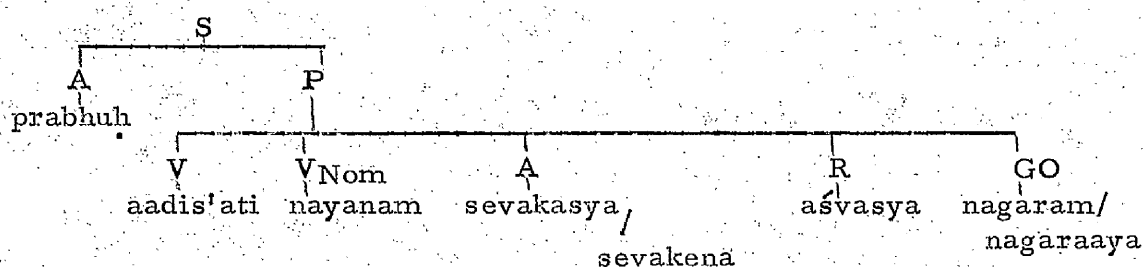
The subjectivalisation-rule may select A (of the matrix S) for agreement with the V. Recall the subjectivalisation-rule explicated earlier (figure XXIV, III.5), which bars the selection of any case-category which has originated in the embedded S, even if A (in matrix S) is not selected for agreement with the V. That statement holds good here as well. However, there is one point to be noted. The subjectivalisation-rule has not applied to S_1 (see figure IX above) and no case-category has been selected for agreement with the VNom (in S_1).

Under these circumstances, the VNom behaves like an O and may be

selected for the process of passivisation in case A is not selected for subjectivalisation.

A is selected for subjectivalisation, the affix-substitution rule replaces features with affixes and the final form is as represented in figure XI. (It may be noted that morphophonemic rules attach g(enitive) obligatorily to R (as'va), optionally to A ('sevaka', i(nstrumental) is attached alternatively), and d/acc to GO ('nagara')).

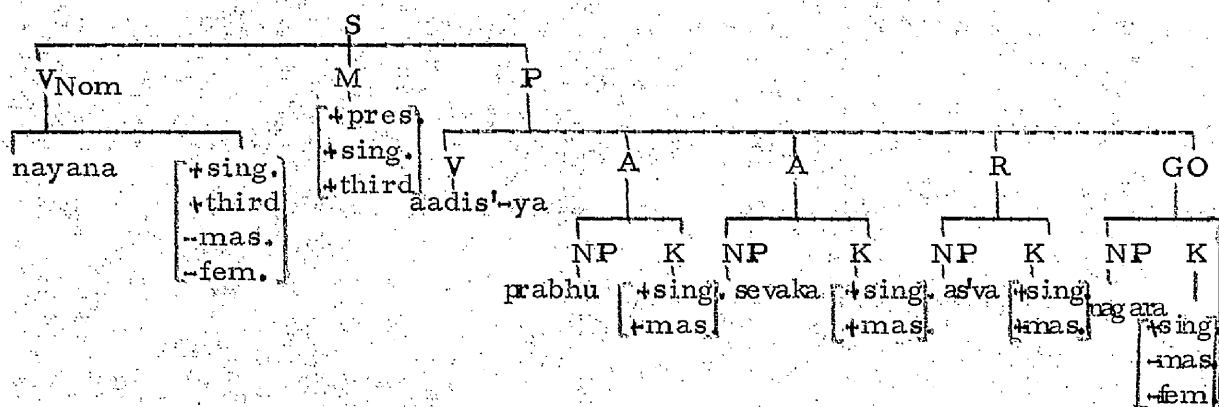
Figure XI



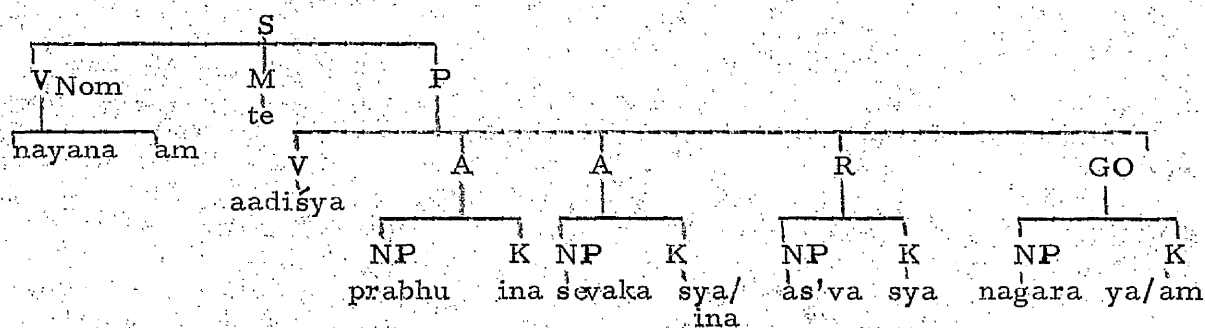
Thus, sentence 13 is derived from figure XI.

Alternatively, if A is not selected for agreement with the V, at the stage of figure X, the process of passivisation operates and the VNom ('nayana') is selected for agreement with the V. The result is as represented in figure XII (from figure X).

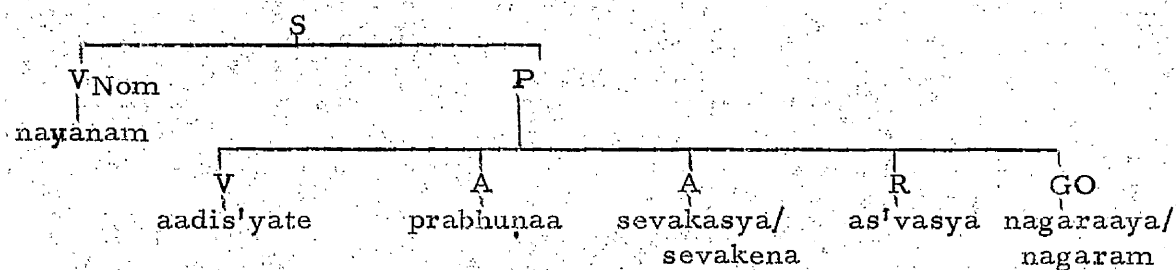
Figure XII



The affix-substitution rule replaces the features with affixes (morphophonemic rules attach 'g/i' to A (of the embedded s), 'g' to R, 'd/acc' to GO. The result is as represented in figure XIII.

Figure XIII

The final form is as in figure XIV.

Figure XIV

Thus, sentence 13' is derived from figure XIV.

Consider, next, sentences 14, 14' and 15, 15' which have the underlying structures as represented in figures XV and XVI respectively.

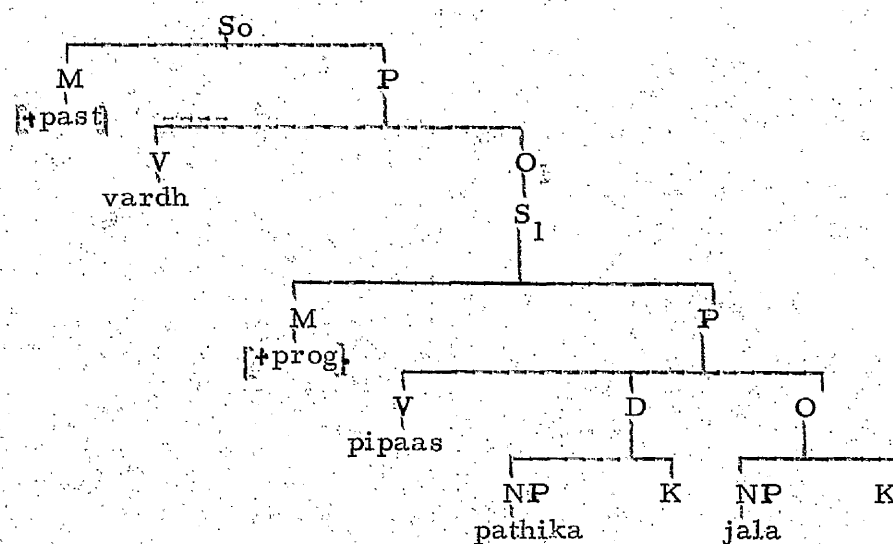
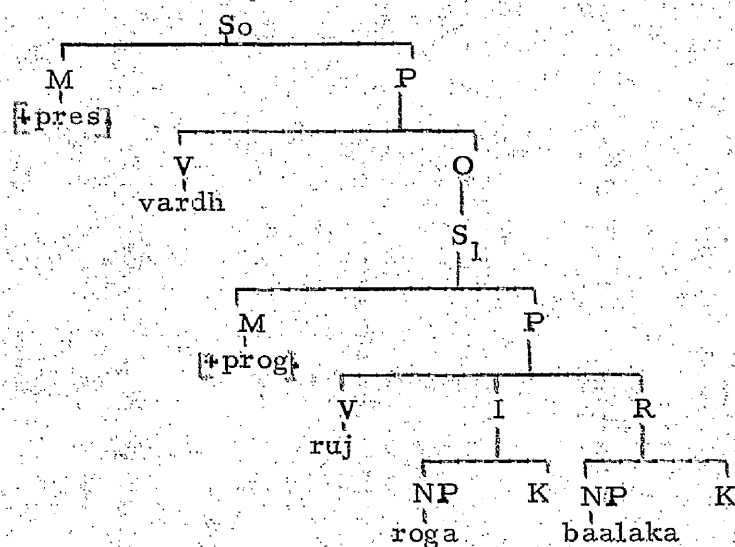
Figure XV

Figure XVI

The nominalisation-rule specifies V (in embedded S's) as V_{Nom} and attaches $[+adj.]$ to V_{Nom} , subjectivalisation does not operate, the node M is deleted, the stem-element $-aa$ is attached to the items under V_{Nom} of the embedded S in figures XV and XVI. The result is as represented in figures XVII and XVIII respectively (omitting intervening details).

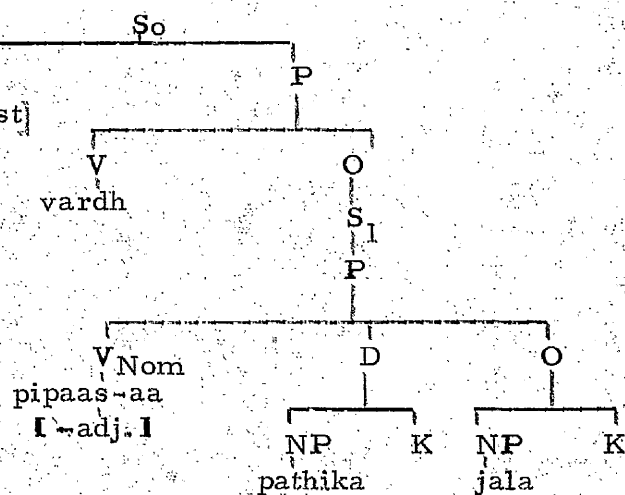
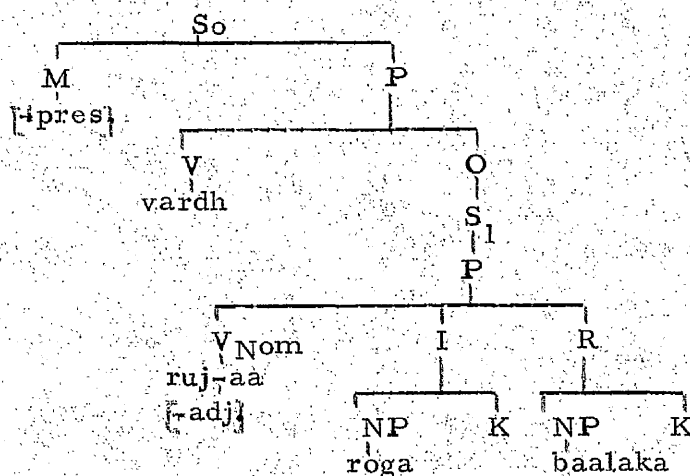
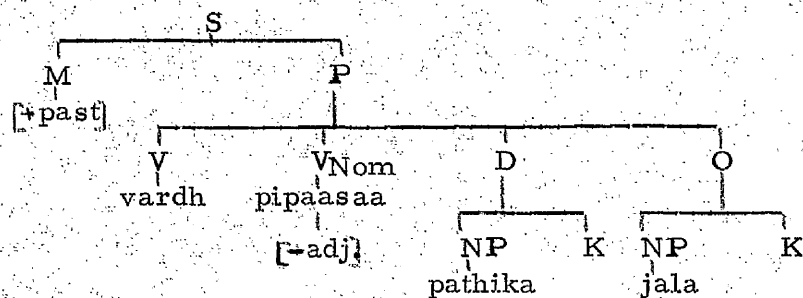
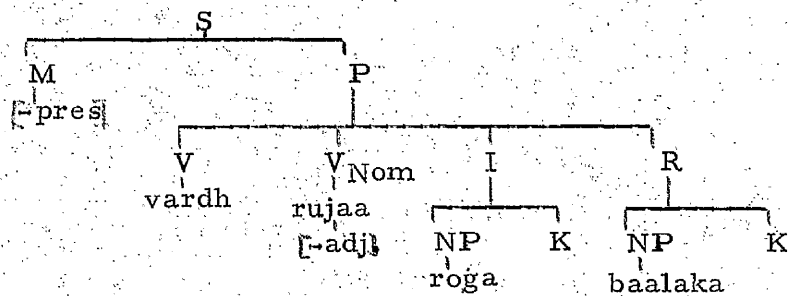
Figure XVII

Figure XVIII

Now, the node-pruning rule deletes the nodes S_1 (in figures XVII, XVIII), the P-raising rule and the P-deletion rule apply and the result is as in figures XIX and XX respectively.

Figure XIXFigure XX

As mentioned above (figure XI, above), no case-category which has originated in the embedded S can be selected for subjectivalisation after P-raising. But, no subjectivalisation-rule has applied to the embedded S and no case-category therein has been selected for

agreement with VNom. Under these circumstances, the VNom behaves like O and can be subject to subjectivisation and the process of passivisation.

VNom is selected for agreement with the V, the Affix-substitution rule replaces the features with affixes (morphophonemic rules attach 'g' to D and O in figure XXI, and 'g/i' to I and 'g' to R in figure XXII). The result is as represented in figures XXI, XXII (omitting intervening details).

Figure XXI

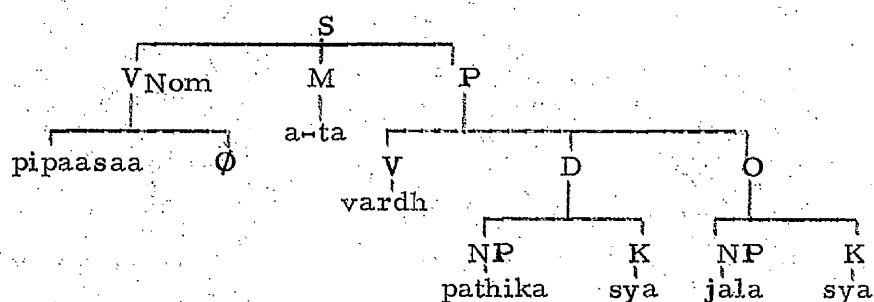
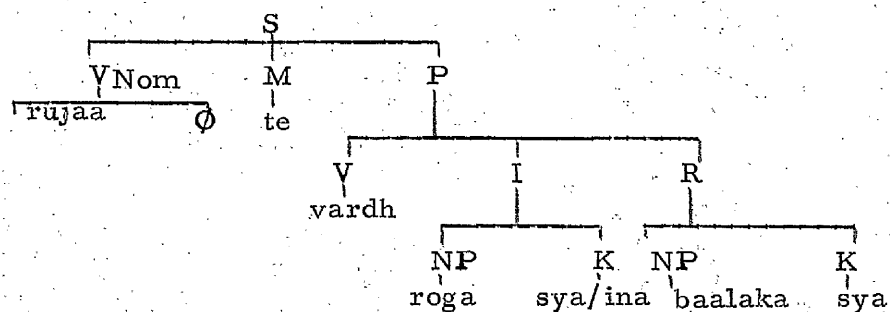


Figure XXII



The final forms are as represented in figures XXIII, XXIV from which sentences 14 and 15 are derived respectively.

Figure XXIII

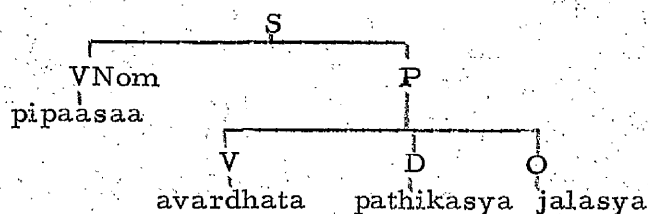
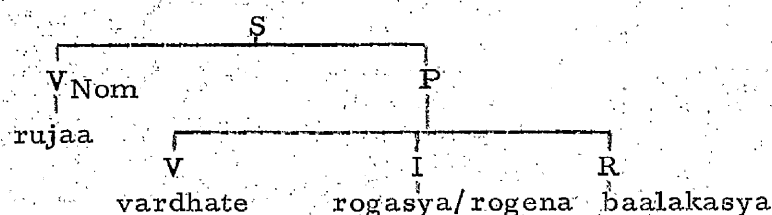
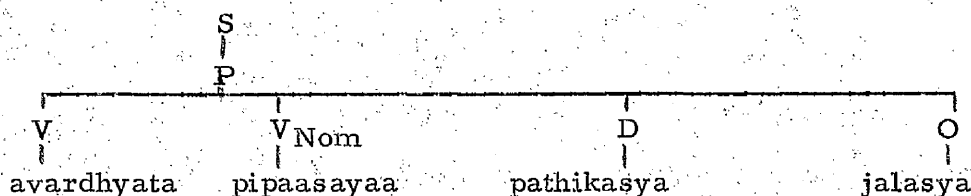
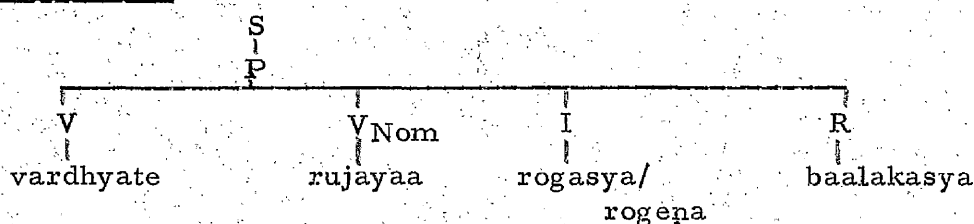


Figure XXIV

Alternatively, if at the stage of figures XIX, XX, the VNom's ('pipaasaa' and 'rujaa') are not selected for subjectivalisation, the process of passivisation without subjectivalisation operates and sentences 14¹ and 15¹ are derived from figures XXV and XXVI respectively (from figures XIX, XX) (omitting intervening details).

Figure XXVFigure XXVI

IV.3.2. In this section, constructions like 10, 11 above (IV.3) and 16, 19 below in which a Genitive (f.n.1) is related to an NP, are discussed. Comparable constructions in other languages, for example in Hindi,¹⁴ have been referred to as 'possessive'. I would refer to them as Genitives. In sentences 10 and 16, the relation between the Genitive and the related NP is 'inalienable' and in sentences 11, 17

14. Kachru, Y., (1969), pp. 37-45.

it is 'alienable'. The inalienability and alienability of relation is discussed later (IV.3.2.1).

16. baalikaayaah - pitaa - yaati
 G g A
 of girl - father - goes

(girl's father goes)

17. baalikaayaah - pustakam - asti
 G g Es
 of girl - book - is

(the girl has a book / there is girl's book)¹⁵

Various scholars have referred to the structural parallelism between locative and possessive constructions.¹⁶ But, this statement does not take into consideration sentences like 10, 16 above. The main motivation for this parallelism appears to be the fact that 'x's' and 'on the table'¹⁶ in sentences such as 'this is x's book: the book is on the table' are not essential constituents. But, this is not true with all Genitive constructions. In sentences like 10, 16, 'vadanam' (face) being a body-part term and 'pitaa' (father) being a relational term, imply a Genitive like 'baalikaayaah' which is not a non-essential constituent. This is true even in sentences like 'vadanam - sundaram - asti' (face - beautiful - is) and 'pitaa - yaati' (father - goes), as the interpretation is always in a context. Lyons does not discuss constructions like 10, 16 above.¹⁷

15. This ambiguous interpretation of sentences like 11, 17 is discussed in IV.3.2.4.

16. Lyons, J., (1969), pp. 391; 334, 344-345. Constructions like 'x's book' vs. 'the book on the table': this parallelism appears to be dependent on the assumption that the underlined segments are "optional or structurally dispensable, constituents of the sentence". cf. id. (1967), pp. 390-96.

17. Lyons, J., (1969), pp. 388-398.

In the case of constructions like 11, 17 above Lyons is in favour of treating 'have' as a surface realisation of the underlying possessive, thus deriving a sentence like "x has a book" \Leftarrow 'the book is x's', on the basis of characteristics in languages like Slavonic and Celtic which have no verbal form comparable to 'have' in English. However, the occurrence of a verb like 'have' in a language like English, makes explicit the distinction between sentences 10, 16 and 11, 17 above.¹⁸ It will be proposed that sentences like 11, 17 have a sentential derivation i.e. have a derivation involving an embedded S (IV.3.2.4), but that sentences like 10, 16 do not.

Consider sentences 18-20 beside 10, 16 above.

18. tasyaah - vadanam - sundaram - asti
 G g O nom
 her - face - beautiful - is
 (her face is beautiful)
19. bhavanasya - praves'advaaram - apaavṛtam - asti
 G g O nom
 of building - entrance-door - opened - is
 (the entrance-door of the building is open)
20. bhaaratasya - usṇakaalah - duḥkhah - asti
 G g O nom
 of India - hot weather - unpleasant - is
 (India's hot weather is unpleasant)

The relationship between the Genitive and the associated NP (in sentences 16, 18, 19, 20) is 'inalienable'. The relation refers to kinship (in sentence 16), to part-whole (in sentences 18, 19: in 18 it is body-part and in 19 it relates to inanimate entities), to weather or meteorological phenomenon (in sentence 20). Though, it is not certain

18. Fillmore, C.J., (1968a), p.66.

that the relationship between 'uṣṇākālah' and 'bhaaratasya' in sentence 20, is inalienable semantically, the relationship in 18, 19 is semantically inalienable. In so far as the syntactic justification is concerned, sentences 18', 19', 20' with the occurrence of 'paars've' are not acceptable (cf. IV.3.2.1).

- 18'. * tasyaah paars've - vadanam - sundaram - asti
his - face - beautiful - is
- 19'. * bhavanasya paars've - praves'dvaaram - apaavṛtam - asti
of building - entrance door - opened - is
- 20'. * bhaaratasya paars've - uṣṇākālah - duḥkhah - asti
of India - hot weather - unpleasant - is

It may be noted that even in a locative sense the occurrence of 'paars've' in 18', 19', 20' is not acceptable.

Thus, the sentences 16, 18-20 are marked for 'inalienable possession' and sentence 17 for 'alienable possession',¹⁹ and henceforth will be referred to as such.

IV.3.2.1. Fillmore proposes two rules for the derivation of constructions with inalienable and alienable possession. Thus a sentence expressing 'alienable possession' like 'my house' in English would be derived from 'I have a house', in which the Genitive and the possessed NP come from an embedded S, the rule-schema for the NP dominating the Genitive being NP → N (S). A sentence expressing inalienable possession like 'my father' would be derived from an NP dominating a D, the rule-schema being NP → N (D).²⁰ In Sanskrit

19. Fillmore, C.J., (1968a) p.66. cf. Chomsky, N., (1970a), pp. 200-07.

20. Fillmore, C.J., (1968a), p.66: the schema, as proposed by Fillmore, is under the sub-title 'adnominal datives' - for him an adnominal dative is 'a possessive modifier' (p.66) of a noun. In IV.3.2.1.1.5, a schema like NP → N(O) also is proposed as it is not the case that the relationship is always to an animate entity.

also, this distinction between sentential and non-sentential derivation of a construction with a Genitive is crucial syntactically and semantically and needs to be retained. However, in the absence of a verb like 'have' there must be some other device to bring out this distinction.²¹

IV.3.2.1.1. Consider first sentences with Genitives which express 'inalienable possession' for which there is a schema like NP → N (D). Thus a sentence like 21 is distinguished from sentence 22 with alienable possession wherein the occurrence of the PP 'paars've' may be accepted as a distinguisher of inalienability. It may be noted that a sentence like 21 cannot have an expansion like 21'.

21. mitrasya - bhagini - yaati
G g A nom
of friend - sister - goes
(friend's sister goes)

22. mitrasya paars've - yat - pustakam - asti - tat - navam -
G g
of friend - which - book - is - that - new -
asti
is
(that book which is of friend, is new)

21' * mitrasya paars've - yaa - bhagini - asti - saa - yaati
G g
of friend - who - sister - is - she - goes

In sentences 21', 22, 'paars've' is not interpreted as a locational

21. Fillmore, C.J., (1968a), p.66: "A distinct method is required for introducing the possessive element in the case of inalienable possession, a method which reflects the fact that the relationship between the two nouns in 'inalienable possession' is not a sentential relationship." In Sanskrit, the occurrence of 'paars've' brings out this distinction between alienable and inalienable relationships. In the case of a Genitive with the cooccurrence of 'paars've' indicating the alienable relationship, a sentential derivation is proposed (IV.3.2.4.).

reference. It may be noted that a sentence like 23 containing 'paars've' with a locational reference (i. e. near) cannot give a sentence like 24, i. e. no optional deletion of 'paars've' (in its locational sense) is allowed.

23. (a) mitrasya - paars've - yat - pustakam - asti - tat ...
 G g
 of friend - near - which - book - is - that ...
 (that book which is near the friend ...)

(b) mitrasya - paars've - maataa - asti
 G g
 of friend - near - mother - is
 (mother is near the friend)

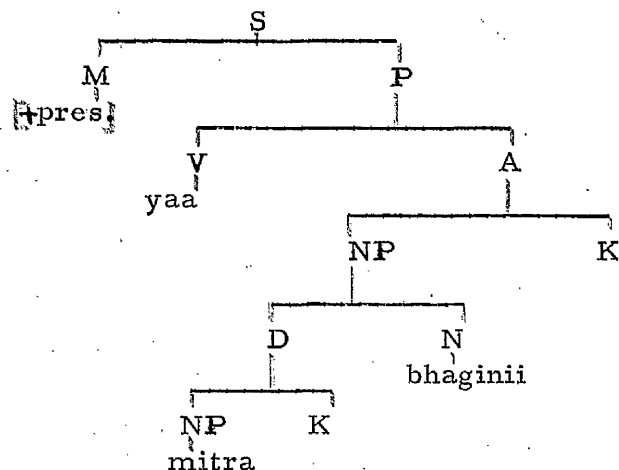
24. (a) * mitrasya - yat - pustakam - asti - tat
 of friend - which - book - is - that

(b) * mitrasya - maataa - asti
 of friend - mother - is

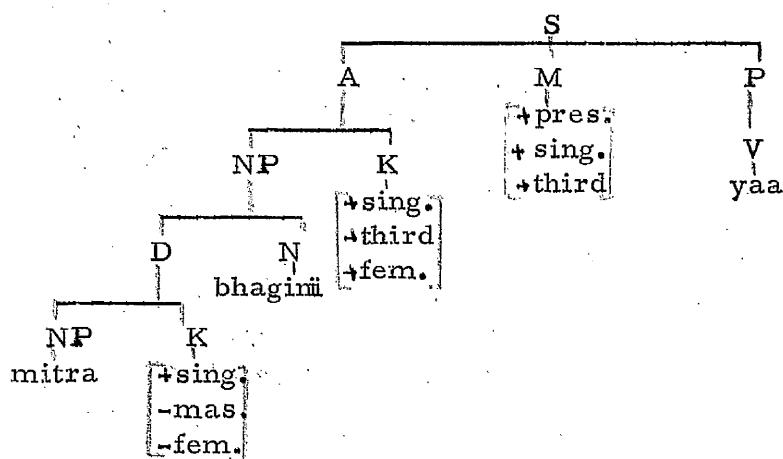
If the locational reference is not implied, sentences like 24(a) can be derived from 23(a). However, it may be recalled that, without a locational reference of 'paars've' sentence 23(b) is unacceptable and as such no question of deriving 24(b) from 23(b) would arise.

In other words, sentences 24(a), 24(b) with the optional deletion of 'paars've' (in locational sense) cannot be derived from 23(a) and 23(b). Sentences 24(a) and 24(b) are, otherwise, acceptable.

IV.3.2.1.1.1. Consider sentence 21 above which has the underlying structure as in figure XXIV.

Figure XXIV

D remains inside A and the subjectivisation rule selects A for agreement with the V. The result is as in figure XXV.

Figure XXV

The affix-substitution rule replaces features with affixes. (It may be noted that a morphophonemic rule obligatorily substitutes 'sya' (genitive) for the features under K dominated by D). The result is as represented in figure XXVI and the final form as in figure XXVII.

Figure XXVI

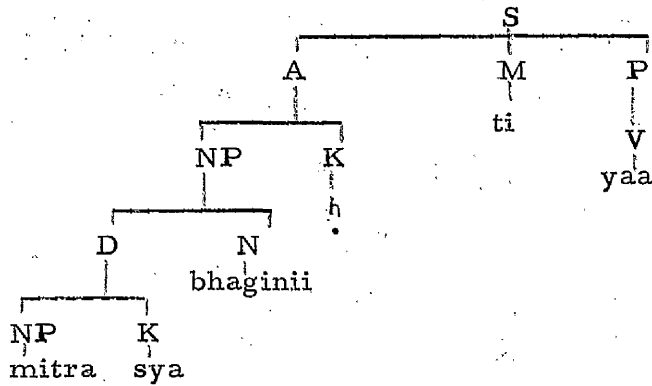
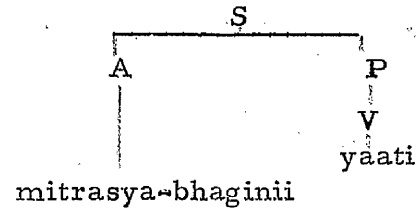


Figure XXVII



IV.3.2.1.1.2

Consider, next, sentences 25-32 which have an attribute-element also. Only sentences 25-26' will be described completely. Sentences 27-32 have a derivation similar to that of 25-26'.

25. sevakasya - netram - kaanam - asti
 D g Es nom T nom
 of servant - eye - blind - is

(the servant is blind in one eye)

- 25'. sevakasya - netrena - kaanena - bhuuyate
 D g Es i T i
 of servant - by eye - by blind - is become

((it) is become blind in one eye of the servant)

26. sevakah - netrena - kaana - asti
 D nom Es i T nom
 servant - by eye - blind - is

(the servant is blind in one eye)

- 26'. sevakena - netrena - kaanena - bhuuyate
 D i Es i T i
 by servant - by eye - by blind - is become

((it) is become blind in one eye by the servant)

27. tasya - varnah - gaurah - asti
 G g Es nom T nom
 his - colour - fair - is

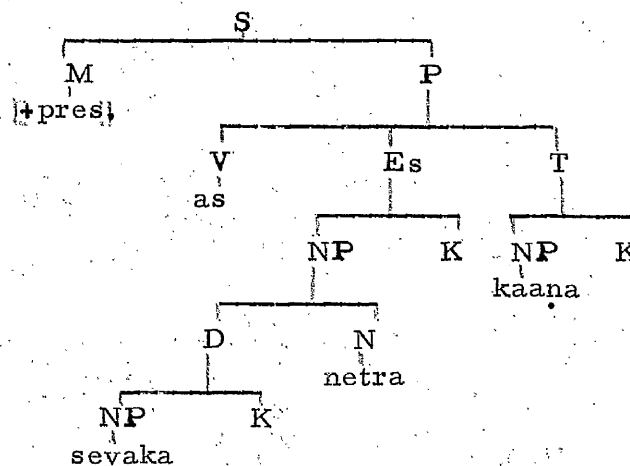
(his colour is fair)

28. sa - varṇena - gaurah - asti
 D nom Es i T nom
 he - with colour - fair - is
 (he is fair in colour)
29. tasyaah - prakṛtiḥ - madhuraa - asti
 D g Es nom T nom
 her - nature - sweet - is
 (her nature is sweet)
30. saa - prakṛtyaa - madhuraa - asti
 D nom Es i T nom
 she - with nature - sweet - is
 (she is sweet by nature)
31. baalikaayaah - aakṛtiḥ - maṇḍulaa - asti
 D Es T
 of girl - look - lovely - is
 (girl's looks are good)
32. baalika - aakṛtyaa - maṇḍulaa - asti
 1 D Es T
 girl - by look - lovely - is
 (the girl is lovely by looks)

Sentences 25-26^f have three elements (i) possessor - 'sevakasya / sevakah' (ii) body-part - 'netram/netrena' and (iii) attribute - 'kaanam/kaanena', which will be referred to as P, B, At respectively for discussion below.

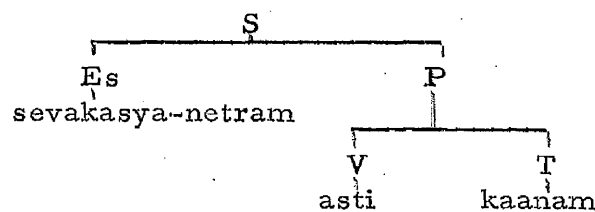
Sentences 25-26 have the underlying structure as in figure XXVII.

Figure XXVII



Now, D may or may not remain inside Es. D is not promoted i. e. remains inside Es and the subjectivalisation rule selects Es for agreement with the V. The affix-substitution rule replaces features with affixes. It may be noted that T takes on the features of Es. (These two processes are similar to those in figures XXV, XXVI above and hence are omitted). The final form is as represented in figure XXIX.

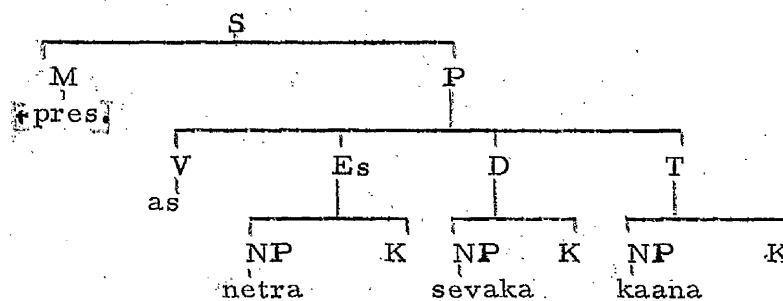
Figure XXIX



Thus, sentence 25 is derived from figure XXIX. If, at the stage of figure XXVIII, the subjectivalisation-rule does not operate, the process of passivisation without subjectivalisation applies and sentence 25' is derived.²² Alternatively, at the stage of figure XXVIII, D is promoted²³ and the result is as in figure XXX (from figure XXVIII).

-
22. This process of passivisation without subjectivalisation operates in the case of sentence 26' as well and may operate in the underlying structures of sentences 27-32 also. As it has been explained more than once before, it will not be referred to again unless necessary.
23. It may be recalled that in the case of sentence 21 (figure XXIV), no possibility of this optional promotion of D is indicated. This optionality of promotion is possible only when the Genitive and the related NP is in body-part (or part-whole) relation, along with the cooccurrence of T in its case-frame. In such constructions only Es can dominate the D in a simplex sentence. The case-category L (in body-part or part-whole relation) also may dominate D (see IV.3.2.1.1.4), but there is no T in the case-frame. In fact this case-category T also is constrained by its attributive feature.

Figure XXX

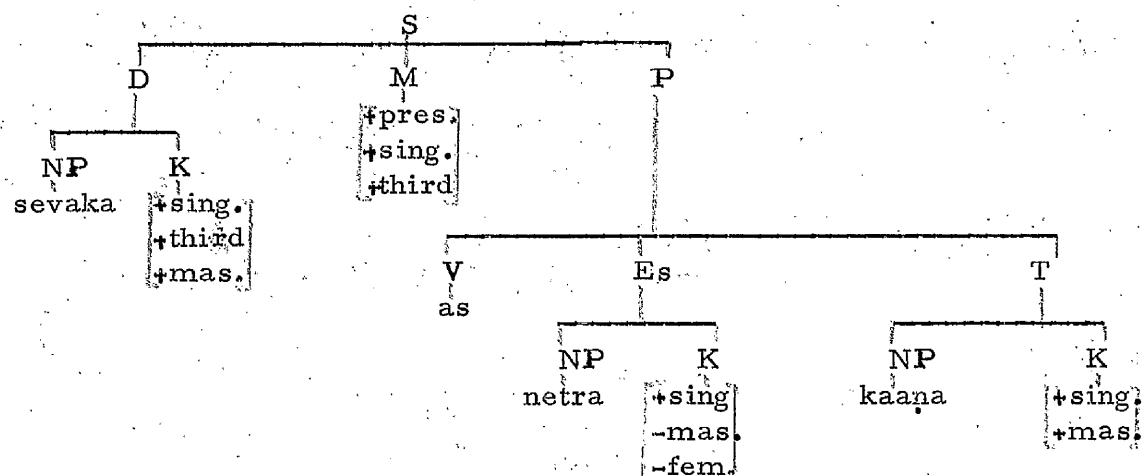


D is selected for subjectivalisation and T takes on the features of D.²⁴

The result is as represented in figure XXXI.

24. There arise three points. In the first instance, figure XXX shows a case-frame like [Es, D, T → I]. But, in the chapter on 'NP-asti-NP sentences', it has not been mentioned that the case-category Es can occur with D. In the second place, what case-category, if any, may be assigned to 'sevaka' (i.e. D) after its promotion (as in figure XXX)? as it is evident that no case-frame containing D has been suggested in the chapter III. Then, would it be necessary to re-label D as Es, after its promotion? The answer is in the negative as cases are specified in underlying structures. A way out of these problems suggests itself in the fact that in such sentences D is always dominated by Es and as such it need not be indicated in the case-frame which is specified as [Es, T → I]. However, a rule may specify that in case D is promoted, the subjectivalisation rule selects D rather than Es (Es is usually selected in the case of an 'NP-asti-NP' sentence). Now, the T takes on the features of this D (which has been dominated by Es and now stands promoted), rather than that of Es (in an 'NP - asti - NP' sentence T takes on the features of Es).

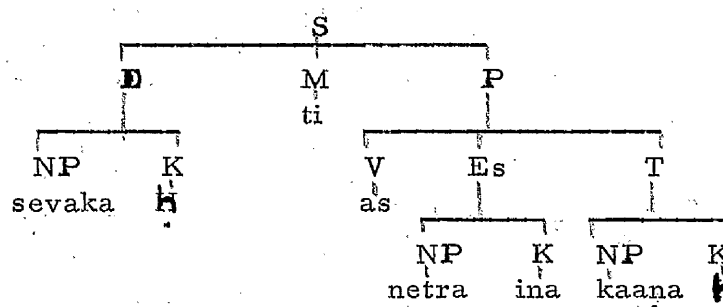
With these processes, there appears to be no need to relabel D after its promotion, which would, otherwise, add to the complexity in the form of two occurrences of the same case-category (if D is re-labelled as Es) in a simplex sentence.

Figure XXXI

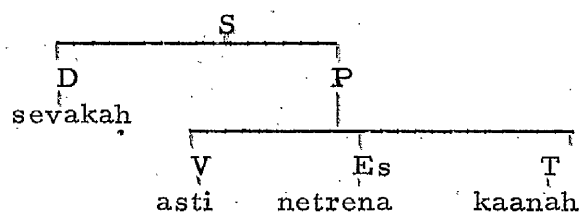
The affix-substitution rule applies and replaces features with affixes.

It may be recalled that the features under K dominated by Es, are obligatorily replaced by 'i' - affix in case Es is not subjectivalised.

The result is as represented in figure XXXII.

Figure XXXII

The final form is as in figure XXXIII

Figure XXXIII

Thus, sentence 26 is derived from figure XXXIII. As mentioned earlier (f.n. 22) sentence 26' can be derived in case the process of passivisation without subjectivalisation operates at the stage of figure XXX.

It may be noted that all sentences (25-32) have the elements P(ossessor), B(ody-part)²⁵ and At(tribute). To account for such constructions (25, 27, 29, 31) Fillmore²⁶ refers to a rule like (i)

[Pg → B] asti At. An alternative rule like (ii) P nom asti [Bi At] is proposed for constructions like 26, 28, 30, 32.

As shown above, the case-categories D, Es, T occurring in a case-frame, dominate NP's which indicate P(ossessor), B(ody-part) and At(tribute) respectively. The rules (i) and (ii) above, show the surface-realizations of sentences like 25, 27, 29, 31 and 26, 28, 30, 32 respectively.

IV.3.2.1.1.3.

Consider, next, sentences like 33-35, in which

the At(tribute) is replaced by a nominal specified as T.

33. baalakah - pustakaih - chaatrah - asti
Es nom i nom
boy - with books - student - is

(from his books, the boy appears to be a student)

34. sa - kesaih - taapasah - asti
Es nom i nom
he - with hair - mendicant - is

(from his hair, he is a mendicant)

35. yuvatii - sinduurena - sabhartrkaa - asti
Es nom i nom
young lady - with vermilion - with husband (married) - is

(the young lady appears married on account of vermilion)

25. One may argue that there is an extension of the notion of 'body-part' (in case of sentences 27-32). The term 'body-part' may be appropriately replaced by 'part-whole', because the possessed NP, even if not a body-part, is conceived as organically related with P(ossessor). The term 'body-part' is retained to have the minimum modification in the rule referred to by Fillmore.

26. Fillmore, C.J., (1968a), p. 64: Fillmore is not explicit as to what is meant by a symbol like '→'. It may be interpreted as P (with genitive inflexion) related to B. The rule as mentioned by him is [P gen → B] be A.

The underlined NP's - 'pustakaih', 'kes'aih', 'sinduurena' - in sentences 33-35, which have been referred to as B(ody-part), may perhaps justifiably, be called 'part-whole'. Whether the appropriate term is 'body-part' or 'part-whole', the relation between the P(ossessor) specified as Es (33-35 above) and the possessed NP's (underlined and unspecified as to their case-category) via T (in above sentences (33-35)) is inalienably conceived. In sentences 33-35 the P(ossessor) is identified with the nominal specified as T. The NP's - 'pustakaih', 'kes'aih', 'sinduurena' - are considered inalienably related to T ('chaatrah', 'taapasah', 'sabhartṛkaa'). It may be noted that through this relation between the NP's (body-part / part-whole) and NP's specified as T, the P(ossessor) (specified as Es) becomes inalienably related to the NP's (body-part / part-whole). This is why the relation between 'baalakah - pustakaih' (boy with books) in sentence 33, unlike that between 'baalakasya - pustakam' (of boy book) in sentence 1 (IV.1) is not an alienable one. Similarly, the relation between 'yuvatii' and 'sinduurena' in sentence 35, is inalienable. This position is further supported by the fact that sentences 33', 35' are unacceptable.

33'. * baalakah - mohanasya - pustakaih - chaatrah - asti
 boy - of m. - with books - student - is

(the boy is a student on account of m.'s books)

35'. yuvatii - piṭakasya - sinduurena - sabhartṛkaa - asti
 young lady - of casket - with vermilion - married - is

(the young lady is married on account of the vermilion of the casket)

Sentences 33-35 show that the inalienability is probably a category of grammar. The set of elements over which this category ranges is language specific, in that it is dependent on the culturally bound definitions of individual lexical items.

IV.3.2.1.1.4.

The sentences discussed above (21, 25-35)

show kinship and body-part (i.e. part-whole) relations. Consider,

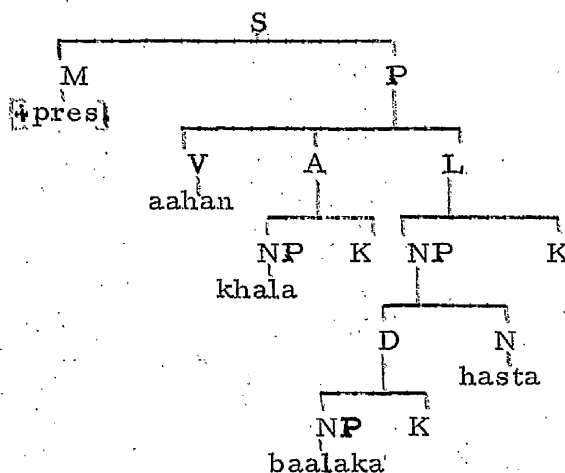
next, a sentence like 36 which also expresses a body-part relation.

36. khalah - baalakasya - haste - aahanti
 A nom D g L 1
 wicked - of boy - on hand - strikes

(a wicked man strikes the boy on his hand)

The above sentence has a case-frame like [A, L ---] wherein L is a body-part and dominates D. The underlying structure of sentence 36 is as represented in figure XXXV.

Figure XXXV



At this stage (of figure XXXV) there are two options: (i) D may remain inside L or (ii) D is promoted. Subsequently, a subjectivalisation-rule applies optionally. Consequently, there are five possibilities as follow:

(a) If D remains inside L

(i) A may be selected for subjectivalisation as in sentence 36 above.

(ii) Or L may be selected for subjectivalisation as in sentence 36(a) below.

(iii) A subjectivalisation-rule does not operate as in sentence 36(b) below.

(b) If D is promoted

(iv) A is selected for subjectivalisation as in sentence 36(c) below.

(v) D is selected for subjectivalisation as in sentence 36(d) below.

36(a). baalakasya - hastah - khalena - aahanyate
 D g L nom A i
 of boy - hand - by wicked - is struck
 (the boy's hand is struck by a wicked man)

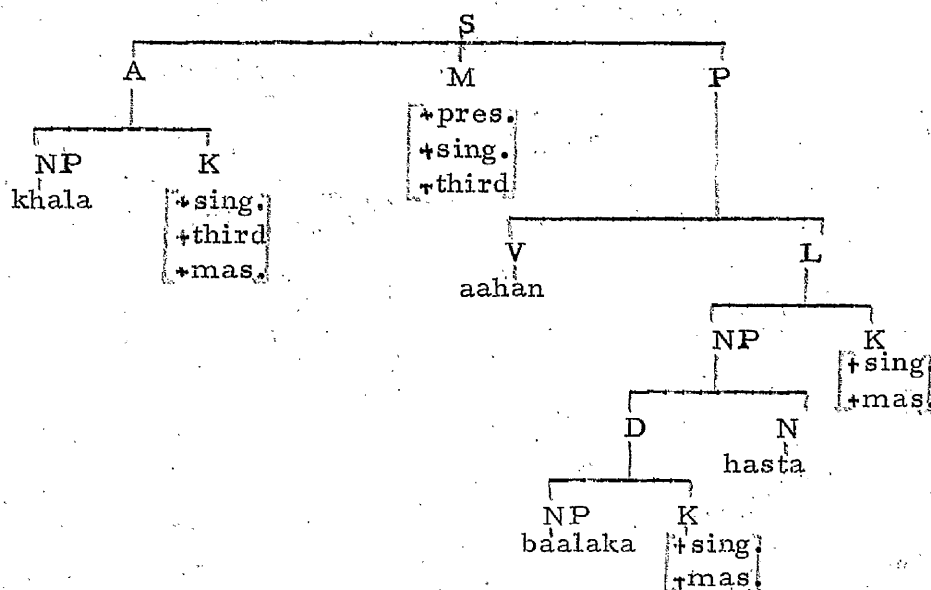
36(b). baalakasya - haste - khalena - aahanyate
 D g L l A i
 of boy - on hand - by wicked - is struck
 ((it) is struck on the boy's hand by a wicked man)

36(c). khalah - baalakam - haste - aahanti
 A nom D acc L l
 wicked - boy - on hand - strikes
 (a wicked man strikes the boy on his hand)

36(d). baalakah - haste - khalena - aahanyate
 D nom L l A i
 boy - on hand - by wicked - is struck
 (the boy is struck on his hand by a wicked man)

Now, the option (a) above is selected (i.e. the D-promotion rule does not apply). A is selected for subjectivalisation and the result is as in figure XXXVI.

Figure XXXVI



The affix-substitution rule replaces features with affixes. It may be recalled that the affix genitive ('sya') is obligatorily added to D in case it is not promoted (cf. figures XXVI, XXIX). The result is as represented in figure XXXVII. The final form is as in figure XXXVIII, from which we obtain sentence 36 above.

Figure XXXVII

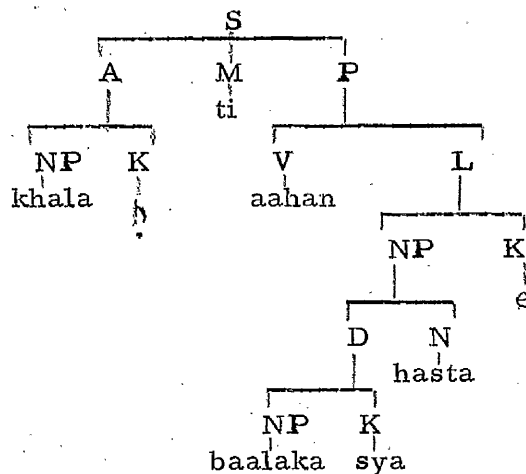
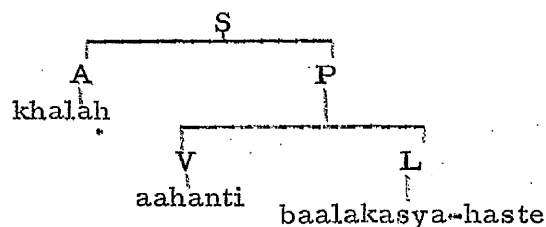
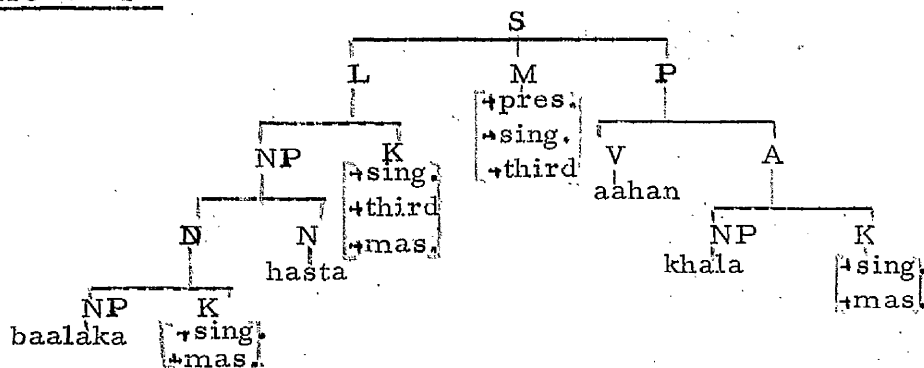


Figure XXXVIII



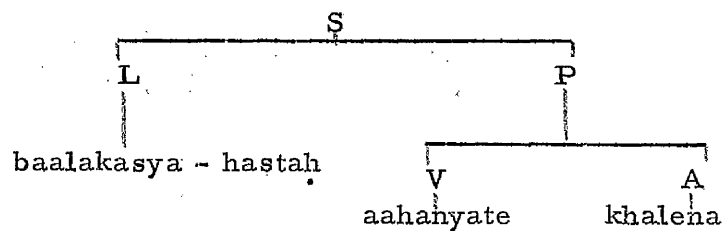
(ii) Alternatively, at the stage of figure XXXV, L is selected for subjectivalisation and the result is as represented in figure XXXIX (from figure XXXV).

Figure XXXIX



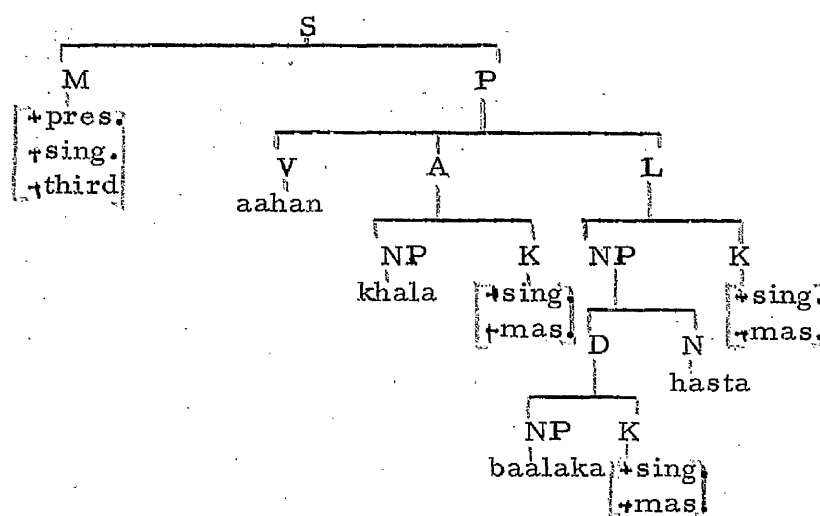
The affix-substitution rule replaces the features with affixes. It may be noted that selection of L for subjectivalisation, usually does not trigger the attachment of 'te' rather than 'ti' under M and the addition of -ya- to V (cf. II.4.4.3). But here, with body-part L these necessarily take place. The final form (omitting the intervening details) is as represented in figure XL from which sentence 36(a) above is obtained.

Figure XL

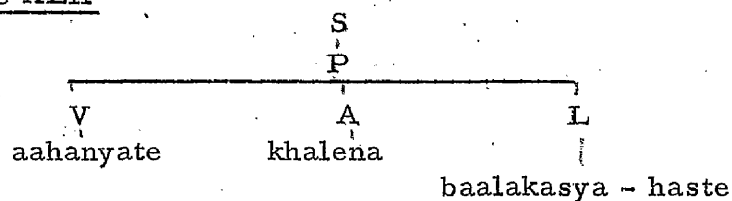


(iii) Alternatively, if the subjectivalisation-rule does not operate and no case-category is selected for agreement with the V, the process of passivisation without subjectivalisation applies and the result is as represented in figure XLI (from figure XXXV).

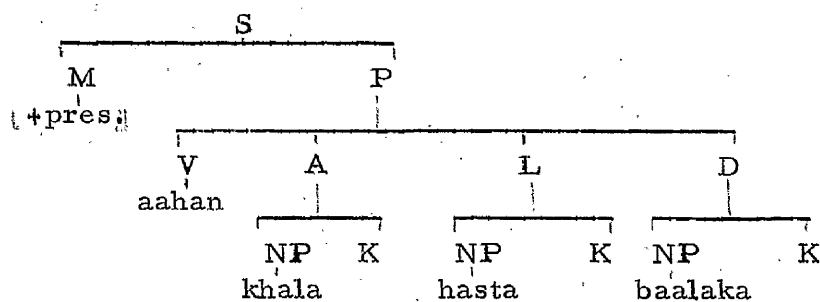
Figure XLI



The affix-substitution rule replaces the features with affixes and the final form (omitting intervening details) is as represented in figure XLII from which sentence 36(b) is derived.

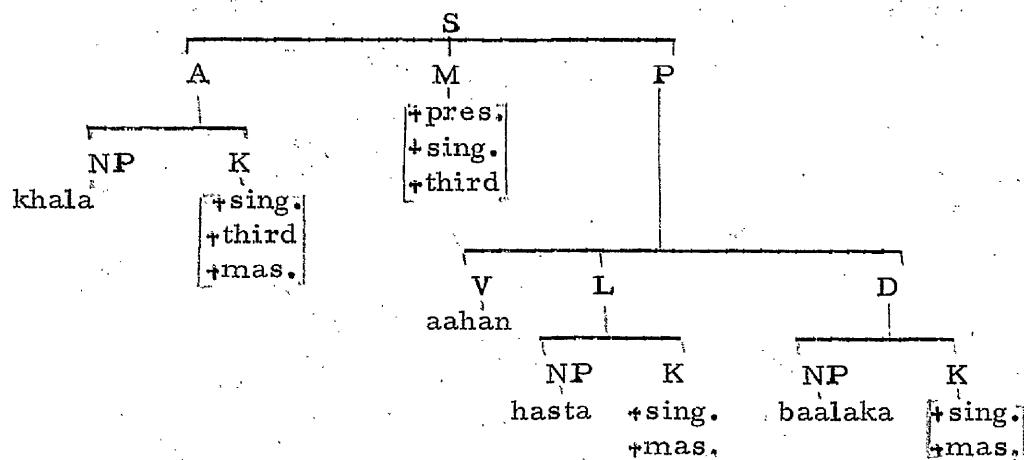
Figure XLII

Now, the option (b) is selected i.e. D - promotion applies. The result is as represented in figure XLIII (from figure XXXV).

Figure XLIII

Now, at the stage of figure XLIII there are two possibilities: either A is subjectivalised or the process of passivisation operates and selects D for agreement with V (it may be noted that the D after its promotion behaves as R).

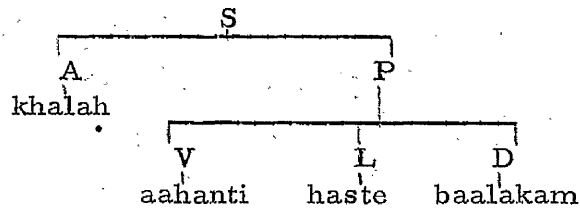
(iv) A is selected for agreement with the V and the result is as represented in figure XLIV

Figure XLIV

The affix-substitution rule applies and replaces features with affixes.

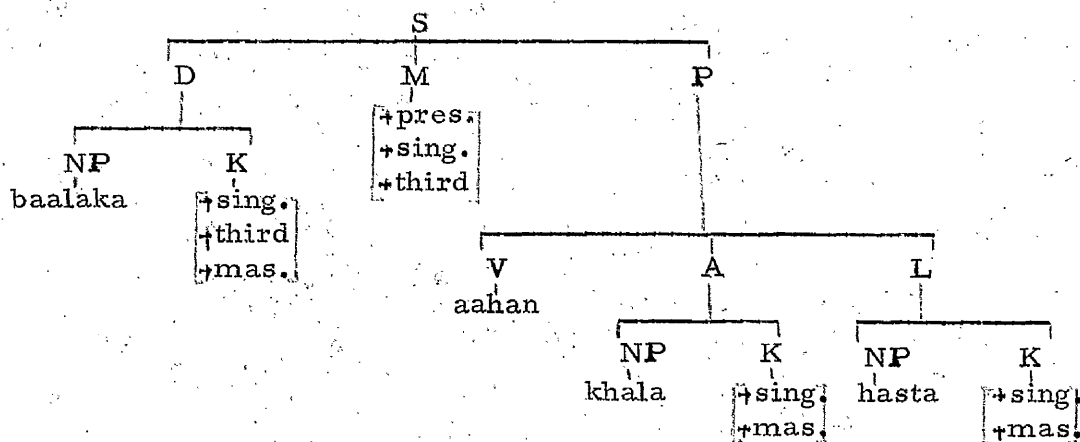
The final form (omitting intervening details) is as represented in figure XLV from which sentence 36(c) is derived.

Figure XLV



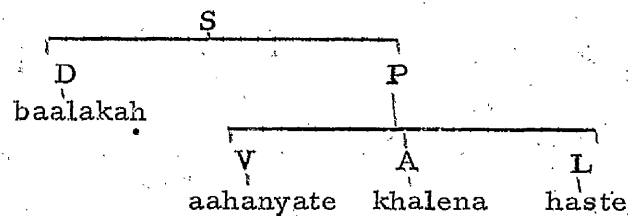
(v) Alternatively, a subjectivalisation-rule does not apply and the process of passivisation operates and selects D for agreement with the V. The result is as in figure XLVI

Figure XLVI



The affix-substitution rule replaces features with affixes. The final form (omitting intervening details) is as in figure XLVII from which sentence 36(d) is derived.

Figure XLVII



All the sentences discussed above (21, 25-32, 26) are such in which the Genitive and the related NP are in kinship or body-part (part-whole) relations. The rule-schema proposed for such constructions is $NP \rightarrow N (D)$. Fillmore would like to have this schema for a sentence like 37 as well.

37. nides'akas'ya - sacivah - aayaati
 A D g nom
 of director - secretary - comes

Fillmore is not explicit whether the relation between the D ('nides'akas'ya) and 'sacivah' is alienable or inalienable, though by implication (as he refers to the schema mentioned above) he rules out a sentential derivation of such constructions. It appears that the occurrence of NP's like 'sacivah' (secretary), 'lipikah' (copyist), 'taNkakah' (typist) which indicate profession, allow the occurrence of 'paars've' in a non-locational sense, as in sentence 38.

38. tasya paars've - lipikah/taNkakah/sacivah - asti
 g
 his - copyist / typist / secretary - is
 (he has a copyist/typist/secretary)

It is considered, therefore, appropriate to treat sentences like 37 and 38 with a sentential derivation (which is discussed in IV.3.2.4.).

Apparent exception to this position may be sentences like 39 wherein the Genitive and the related NP involve a designation like that in sentence 39.

39. upakulapateh - sacivah
 of vice-chancellor - secretary
 (vice-chancellor's secretary / secretary to the vice-chancellor).

It is not clear²⁷ whether constructions like 39 can better be treated according to the schema $NP \rightarrow N (D)$ or $NP \rightarrow (S)$.

IV.3.2.1.1.5. Consider, next, sentences like 40-43, wherein the items related to Genitives refer to inanimate P(ossessor) in part-whole relations.

40. aasandyaah - paadah - navah - asti
 G g Es nom T nom
 of chair - leg - new - is

(chair's leg is new)

41. phalakasya - prstham - nirmalam - asti
 G g Es nom T nom
 of board - surface - clean - is

(board's surface is clean)

42. pustakasya - prsthaani - navaani - santi
 G g Es nom T nom
 of book - pages - new - are

(book's pages are new)

43. grhasya - dvaaram - laghu - asti
 G g Es nom T nom
 of house - door - small - is

(house's entrance-door is small)

(It may be noted that sentences like 40-43 call for a modification in the schema $NP \rightarrow N (D)$ to $NP \rightarrow N (O)$ (cf. IV.3.2.1, f. n. 20).

None of the above sentences (40-43) can, according to the earlier criterion, have a sentential derivation for the Genitives.

27. It has been argued that the distinction between 'alienable' and 'inalienable' is not relevant here as one can have a sentence like: 'a secretary emerged from the office' (Stockwell, R. P., p. 736).

It may be recalled that all such Genitives which have alienable relationship with related items (and have a sentential derivation) allow the occurrence of 'paars've'. But, sentences 40'-43' are unacceptable and as such sentences 40-43 cannot have a sentential derivation.

- 40'. * aasandyaah paars've - paadah - navah - asti
 of chair - leg - new - is
- 41'. * phalakasya paars've - prstham - nirmalam - asti
 of board - surface - clean - is
- 42'. * pustakasya paars've - prsthaani - navaani - santi
 of book - pages - new - are
- 43'. * grhasya paars've - dvaaram - laghu - asti
 of house - door - small - is

However, a sentence like 44 wherein the Genitive and the associated item are not inalienably related, is acceptable even without a locational reference.

44. guroh paars've²⁸ - lekhanii - asti
 G g Es nom
 of teacher - pen - is

(teacher has a pen)

(sentences like 44 are discussed in IV.3.2.4.).

IV.3.2.1.1.6. Consider, next, sentences like 45 which contain a directional indicator and exhibit the inalienable relation between the Genitive and the directional indicator.

45. guruh - mama - vaamatah - asti
 Es nom G g L
 teacher - my - to left - is

(the teacher is to my left)

28. 'paars've' may mean 'near' also. Here it is not semantically significant i. e. has no locational reference. In 44, it gives the sense which would be captured by 'have' in English and 'ke-paasa' in Hindi.

The relation between 'mama' and 'vaamatah' may be treated as body-part relation. Though NP's indicating direction, may occur without any personal references as in 45', a personal reference is always implied.

45'. guruh - vaamatah - asti
 teacher - to left - is

(the teacher is on (my) left)

Perhaps one may argue that in 45', the reference may be other than the speaker (i. e. 'mama') and the directional NP 'vaamatah' may involve reference to a building or anything else. However, this interpretation is possible only in a context. In fact, the absence of an overt form of personal reference (in 45') is due to the fact that they usually refer to "position or direction with respect to the speaker or addressee in an utterance, and there are simply many situations in which an adnominal D need not be expressed if it identifies speaker or hearer."²⁹

One may suggest that Ross's postulation of a performative analysis³⁰ in the form of a superordinate sentence containing the NP 'aham' (I) may account for structures like 45'. But, the performative analysis of declarative sentences does not appear to be strongly motivated in the case of Sanskrit.

In a performative analysis, the superordinate sentences 'must have first person subject' and 'usually have second person direct or indirect objects in deep structure.'³¹ Ross considers the occurrence of

29. Fillmore, C.J., (1968), p. 80.

30. Ross, J.R., (1970), pp. 222-272.

31. Ross, J.R., (1970), p. 222.

the NP 'I' in the superordinate performative sentence the most significant and gives 'seven arguments suggesting the existence of a higher subject I.'³²

Ross's other arguments³³ relate to the occurrence of the reflexive 'myself' in different structures without the cooccurrence of the pronominal, which necessitates that there is a superordinate sentence with 'I', which would be deleted through a performative -deletion-rule, after it has led to the reflexivisation of the coreferential NP. In Sanskrit, such exigency does not arise, as would be shown by sentences 46 and 46'. In 46 the reflexive 'svayam' is optional and in 46' the reflexive does not occur. A sentence like 46'' with a reflexive and with/without a pronominal is unacceptable.

46. patram - raameṇa - mayaa - (svayam) - ca - alikhyata
O nom A i A i
letter - by r. - by me - (self) - and - was
written
(the letter was written by R. and by myself)

46'. mama/mayaa - samaah - chaatraah ...
g i
my / with me - like (equals) - students
(students like myself)

46''. * aatmanah /aatmanaa - (mama/mayaa) - samaah - chaatraah
of self / by self - (my / by me) - like - students

Thus, it seems that as Sanskrit has no exact parallel to the English reflexive, and no other motivation is apparent, Ross's arguments do not carry over to Sanskrit.

Now consider a sentence like 47 for which Fillmore,³⁴ would

32. Ross, J.R., (1970), pp.226, 236.

33. Ross, J.R., (1970), pp.225-236.

34. Fillmore, C.J., (1968a), p.80.

propose a schema like $NP \rightarrow N (L)$.

47. parvatasya ~ mekhalaa
 O g nom
 of mountain ~ slope
 (slope of mountain).

But according to him, 'mekhalaa' (slope) would be a 'locational noun' and 'parvatasya' (of mountain) also would be an 'adnominal L'. The NP 'mekhalaa' indicates a part-whole relation and may be assigned a case-category which is not necessarily L. But, there appears to be no reason to assign the case-category L to 'parvatasya'. An inanimate Genitive need not be L always (cf. sentences 40-43) and it is more appropriate to specify it as O like the Genitives in 40-43 above. Thus the rule proposed by Fillmore may be modified as $NP \rightarrow N (O)$. In construction 47 above, the relation between the Genitive and the associated NP is a part-whole and thus inalienable. A construction like 47' is unacceptable. It may be noted that even in the sense of locational reference the occurrence of 'paars've' would not make 47' acceptable.

- 47'. * parvatasya paars've ~ mekhalaa
 of mountain - slope

IV.3.2.1.1.7. Now, take the problem of some nouns like 'paars've' (proximity), 'purastat' (in front), 'parastat' (beyond) which indicate a location or direction "with reference to the associated object but not considered as a part of it."³⁵ Such nouns³⁶ are semantically

35. Fillmore, C.J., (1968a), p. 81.

36. They are referred to as P(ost) P(osition), though no restriction to sequential ordering is assumed.

significant.³⁷ Such nouns involve some reference-point and the relationship between them and the objects with reference to which they are associated, is akin to the inalienable relationship between the possessor and the possessed item. Such nouns convey spatial / temporal orientation and can be conceived only in relation to the associated object. The occurrence of 'paars've' as in sentences 48-50 is not permissible. Sentences 48'-50'' are unacceptable.

48. vidyaalayasya ~ purastat
 g
 of school - in front

 (in front of the school)
49. bhavanasya ~ pas'caat
 g
 of house - behind

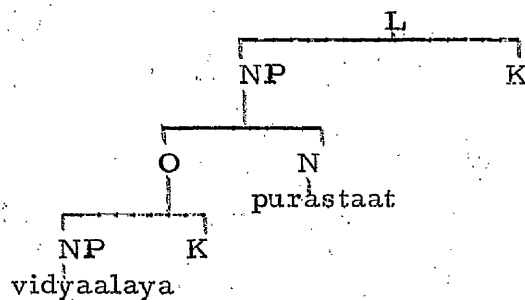
 (behind the house)
50. mandirasya ~ paars've
 g
 of temple - near

 (near the temple)
- 48'. * vidyaalayasya ~ paars've ~ purastat
 of school - - front of
- 48''. * purastat ~ vidyaalayah ~ vidyate
 in front - school - is
- 49'. * bhavanasya ~ paars've ~ pas'caat
 of house - - behind
- 49''. * pas'caat ~ bhavanam ~ asti
 behind - house - is
- 50'. * mandirasya ~ paars've ~ paars've
 of temple - - near
- 50''. * paars've ~ mandiram ~ asti
 near - temple - is

37. Robinson, J.J., (1969), pp.58-59.
 cf. Kachru, Y., (1969), p.39.

Sentences like 48'', 49'', 50'' are acceptable in discourse, but they would be interpreted in reference to some object other than that in 48'', 49'', 50''. All such constructions 48-50 are accounted for by a rule-schema like $NP \rightarrow N(O)$, the NP being dominated by L. Thus the underlying structure of 48 would be as represented in figure XLVIII.

Figure XLVIII



Constructions 49-50 also have an underlying structure similar to that in figure XLVIII. A morphophonemic rule, later in the derivation, attaches the genitive-affix to O dominated by L.

IV.3.2.2. In the foregoing sections (IV.3.2.1.1. - IV.3.2.1.1.7), two schemata are proposed: (i) $NP \rightarrow N(D)$ and (ii) $NP \rightarrow N(O)$ to account for the inalienably related Genitives and associated/possessed items. The schema (i) relates to kinship and body-part relations (sentences 10, 21, 25-32, 36) and the schema (ii) relates to part-whole relations (inanimate entities (sentences 40-43, 48-50)). In sentences 48-50 the case-category L and in sentences 40-43, 47 the case-category O dominate the NP which is expanded according to the schema $NP \rightarrow N(O)$. In sentences 44, 45 the case-category L dominates the NP which is expanded following the schema $NP \rightarrow N(D)$. For all the constructions containing Genitives which express inalienable relation a schema

$NP \rightarrow N \left(\begin{smallmatrix} D \\ O \end{smallmatrix} \right)$ may be proposed.

IV.3.2.3. Before taking up for analysis constructions which are characterised by an alienable relationship between the possessor and the possessed/associated item, one point needs to be considered in the context of the derivation of the embedded D/O. A schema like $NP \rightarrow N \left\{ \begin{smallmatrix} D \\ O \end{smallmatrix} \right\}$ somewhat modifies the notion of case, which has been developed in relation to verbs. Postulation of a schema like the above implies an extension of the notion of case in relation to nouns as well. Now, just as selectional features of verbs determine a case-frame,³⁸ nouns like sister, hand, entrance, side may be considered to have aspects of meaning appropriate to selecting a case. But, it may be difficult to accept that nouns like house/chair may have aspects of meaning which induce the selection of a particular case.³⁹ This difficulty may be overcome in the case of a sentential derivation of Genitives which indicate an alienable relation between the possessor and the possessed/associated item (IV.3.2.4).

IV.3.2.4. For constructions which indicate alienable possession, Fillmore proposes a sentential derivation i.e. $NP \rightarrow N(S)$. It has been mentioned earlier that such constructions are distinguished from those showing inalienable possession, by the occurrence of 'paars've' in the former set of sentences (1, 11, 17, 44).

38. Stockwell, R.P., et.al. (1968), p.721: "there appears to be a very close relationship ... between aspects of the central essential meaning of a verb and the case-frame it selects."

39. Stockwell, R.P., et.al. (1968), pp.720-21.

Consider sentences like 51 which is derived from sentence 51'.

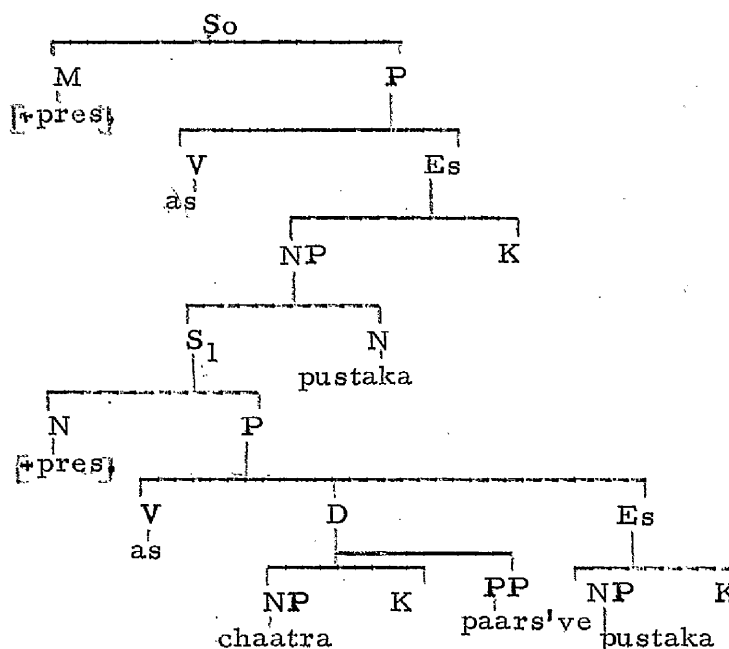
51. chaatrasya - pustakam - asti
 G g
 of student - book - is

(the student has a book / there is the book of the student)

- 51'. chaatrasya paars've - pustakam - asti
 G g
 of student - book - is

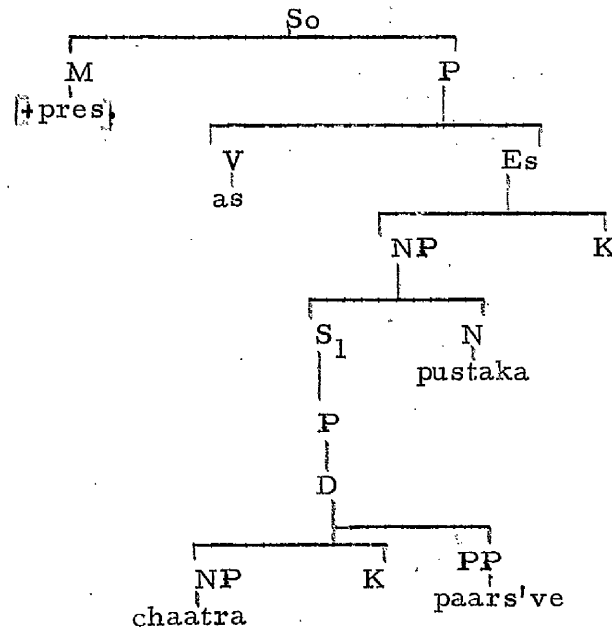
In accordance with the schema, sentences 51, 51' have the underlying structure as in figure XLIX.

Figure XLIX

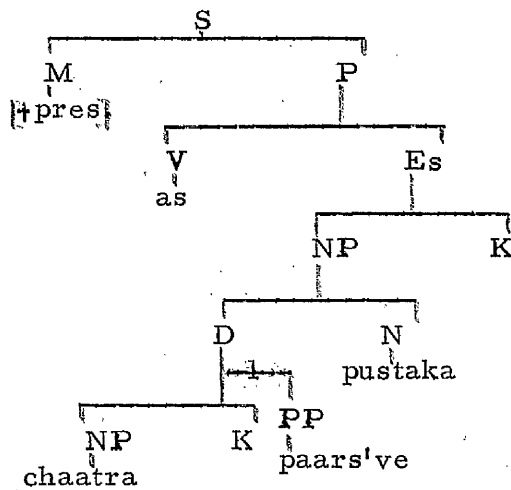


Fillmore suggests that the NP under Es in S_1 is a co-referential copy⁴⁰ of the N 'pustaka' under Es in S_0 . This NP can be replaced by a relative-marker to derive a relative-clause from S_1 . Es in S_1 is selected for subjectivalisation and then there is deletion of the items under Es and V under identity. Consequently, the node M is also deleted. The result (omitting intervening details) is as represented in figure L.

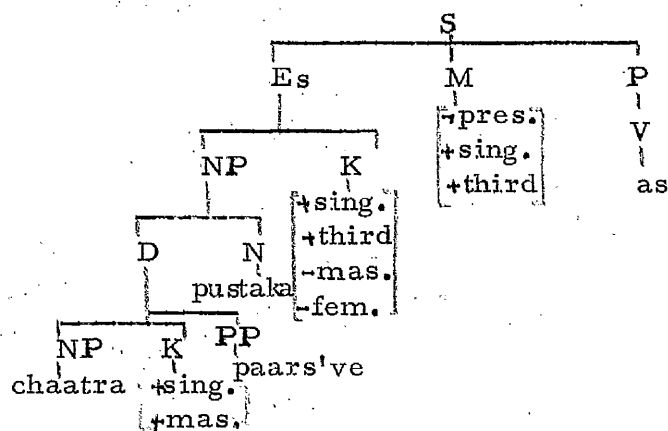
40. Fillmore, C.J., (1968a), p.49.

Figure L

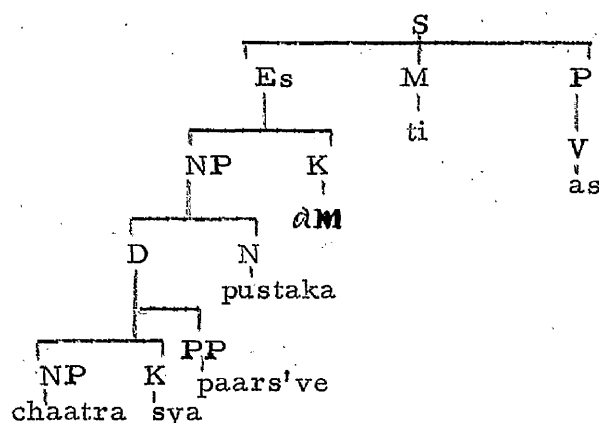
The node-pruning rule deletes the nodes S_1 and P . The result is as represented in figure LI.

Figure LI

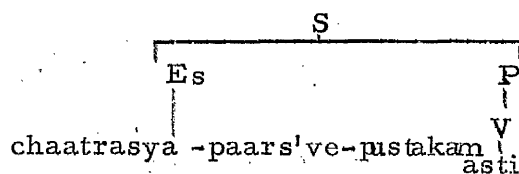
The subjectivalisation-rule selects **Es** for agreement with the **V** and the result is as in figure LII.

Figure LII

The affix-substitution rule replaces the features with affixes, a morphophonemic rule obligatorily attaches the genitive ('sya') to K under D due to cooccurrence of 'paars've'. The result is as represented in figure LIII.

Figure LIII

The final form is as in figure LIV.

Figure LIV

A 'paars've' - deletion rule optionally deletes 'paars've'. Thus sentences 51, 51¹ are derived from figure LIV. It may be added that a sentence like 51 above is ambiguous. In addition to the meaning "the student has

a book', it may be interpreted in the sense of 'there is the book of the student'. But, in this latter sense the Es 'pustaka' is interpreted as **I + definite I**.

Consider, lastly, a sentence like 52 which is four ways ambiguous.

52. raamasya - citram - asti
 G g Es nom
 of r. - picture - is

(there is the picture of r. / r. has a picture)

Sentence 52 may be interpreted like sentence 51 above and its derivation (similar to that of sentence 51 (figures L-LIV)) would be from a structure underlying sentence 52'.

- 52'. raamasya paars've - citram - asti
 G g Es nom
 of r. - picture - is

Alternatively, sentence 52 may be derived from structures underlying sentences 53, 54.⁴¹

53. citram **I** raamah - citram - aracayat **I** - asti
 Es A F
 picture **I** r. - picture - composed **I** - is
54. citram **I** - raamasya - citram - aracayat **I** - asti
 Es A D F
 picture **I** (someone) - of r. - picture - composed **I** - is

41. cf. Chomsky, N., (1970a), pp.200-07: Chomsky would consider a construction like 'J's picture ... \Leftarrow ((i) the picture that J has, (ii) the picture of J.), to be related to the interpretation (iii) the picture that J. painted, 'with a generalisation of the notion 'inalienable possession' to a kind of 'intrinsic connection' (pp.205-206).
 cf. Kachru, Y., (1969), p.44, (1966), pp.107-108: Kachru would like to handle the third interpretation separately from the other two.

The derivation of sentences 53, 54 which have the underlying structures as represented in figures LV and LVI respectively, involves the process of nominalisation which has been discussed earlier (IV.3.1.1.) and accordingly it will not be discussed further here.

Figure LV

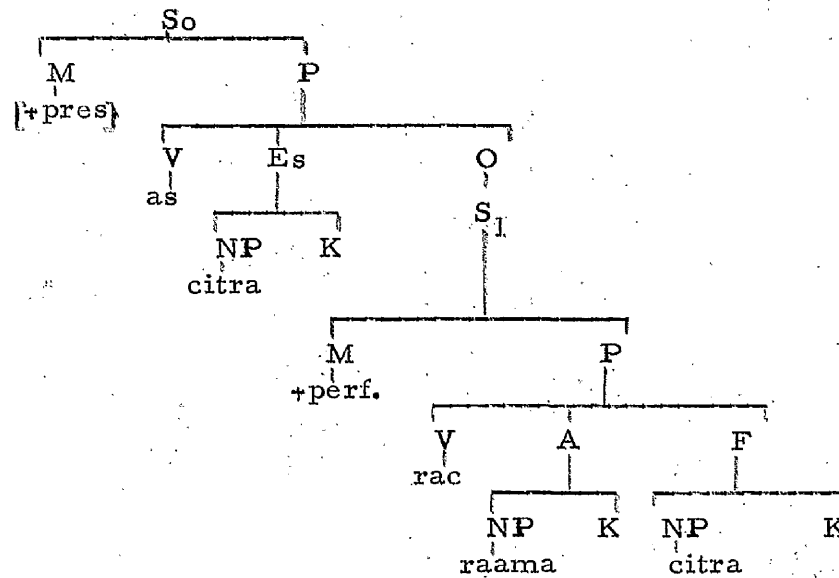
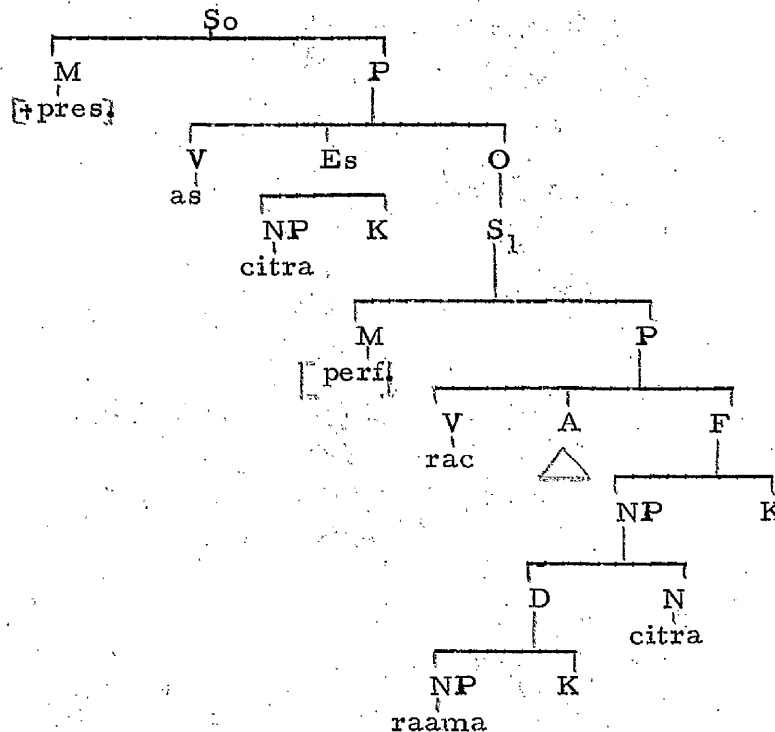


Figure LVI



CHAPTER V

V. This chapter deals with Coordination and the Com(itative)¹ as related to the former. The discussion starts with a brief reference to the approach of the Sanskrit grammarians and follows the suggestions of different linguists in regard to two kinds of coordinatinn - phrasal and derived - on the basis of various types of evidence in Sanskrit. Phrasal coordination is distinguished from derived coordination (V.6.1) and is discussed in detail as related to "Com" whose status as a case-category is re-examined.

V.1. The Sanskrit grammarians have referred to coordination in only a sketchy way.² The Sanskrit grammar, aṣṭādhyāyī, gives

-
1. Fillmore, C.J., (1968a), pp. 81-83: he postulates a case-category like Com in such constructions.
 2. Speijer, J.S. (1886) pp. 338-39 (sections on copulative particles) cf. Whitney, W.D., (1889), pp. 416-17: "purely of conjunctive value are 'ca' (and) and 'vaa' (or) both tenseless and never having the first place in a sentence or clause." cf. Kale, M.R., (1918), p. 236: It gives a mere list of copulative conjunctions in addition to interrogatives, causals, affirmatives, negatives and disjunctives, adversatives, conditionals. cf. Apte, V.S., (1921), pp. 172-73. It refers to a couplet, "caanvaacāye samaahaarepydnyonyāarthe samuccāye. pakṣaantare tathā paadapuuraṇepyavadhaarāṇe" which more relates to the uses of 'ca' than to coordination as a syntactic phenomenon. "Lexicographers give us the senses of 'ca': (i) 'anvaacaya' ('connecting a subordinate fact with a principal one' as 'bhikṣaam- ata - gaam - ca - aanaya' (go to beg (and while doing so) bring the cow')), (ii) 'samaahaara' ('is 'collective combination', as, 'paanii - ca - paadau - ca - paanipaadam' (hands and feet)); (iii) 'itaretara' is ('mutual connection' as 'plakṣaḥ - ca - nyagrodhaḥ-ca-plakṣanyagrodhau' (plakṣa-tree and nyagrodha - tree')). (iii) is considered opposed to (ii) as in (ii) each member of the compound is viewed separately (Apte, V.S., Sanskrit-English-Dictionary, p. 245); (iv) 'samuccāya' (is 'aggregation, as 'pacati-ca-pathati-ca (cooks and reads)') It is apparent that the interpretations of (ii) and (iii) are based on the morphology of compounds. Example in (i), even if the interpretation is accepted (though the subordination is non-linguistic and non-syntactic), is ambiguous and it is not clear how it is different from (iv).

one rule for explaining the three structures exemplified below.

1. sa - mitreṇa - (saha) - yaati
 i
he - with friend - (with) - goes

(he goes with (his) friend)
2. sa - asinaa - (saha) - yaati
 i
he - with sword - (with) - goes

(he goes with a sword)
3. sa - jalena - (saha) - dugdham - mis'rayati
 i
he - with water - (with) - milk - mixes

(he mixes milk with water)

The rule³ specifies that the i(nstrumental) affix is attached to the NP which cooccurs with the P(ost) P(osition) 'saha'. It is clear that this rule relates to morphological considerations. It would not be incorrect to say that Paanini does not deal with coordination as such.

V.2. It has been proposed that there are two kinds of coordination for deriving conjoined structures: (i) phrasal conjunction⁴ (ii) and derived conjunction.⁵ Consider sentence like 4.

4. raamah - mohanah - ca - yaatah
r. - m. - and - go
(r. and m. go)

3. Paanini, rule II. 3. 19: 'sahayukte-apradhaane'.
4. Lakoff, G. and S. Peters (1969), p. 113: "...of elements of equal rank (lower) than a sentence connected by a conjunction", cf. Miller, J., (1971), p. 55.
cf. Smith, C.S., (1969), p. 77: "Sentences with unit plural NP's ... produced at the phrase structure level ..."
5. Stockwell, R.P. et al. (eds.), (1968), p. 323.
Smith, C.S. (1969), p. 77 "sentences with separate-entity plural NP's ... produced by a conjunction transformation".

which may be interpreted either as sentence 5 or 6.

5. raamah - mohanah - ca - saha - yaatah
r. - m. - and - together - go

(r. and m. go together)

6. raamah - mohanah - ca - prthak - yaatah
r. - m. - and - separately - go

(r. and m. both go)

Accordingly a conjoined structure like 4 may be derived from an underlying structure like I or II.

Figure I

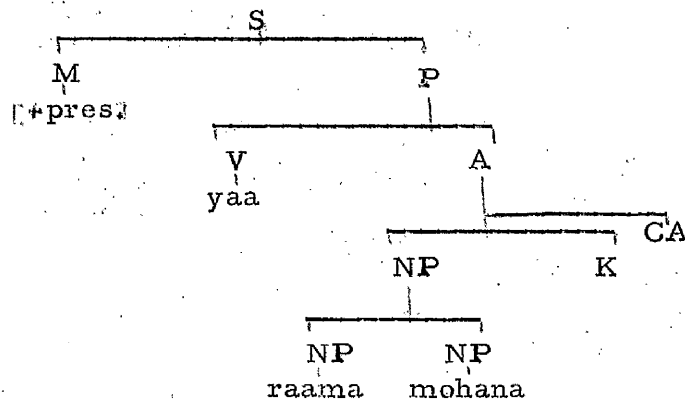
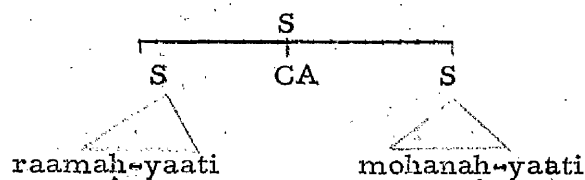


Figure II



If figure I is accepted as the underlying structure, sentence 4 is an instance of 'phrasal conjunction' parallel to sentence 5 above, and if figure II is considered to be the underlying structure, sentence 4 is an instance of 'derived conjunction' parallel to sentence 6 above.

V.3.1. Linguists have taken differing positions in regard to the above-mentioned two kinds of coordination. Chomsky⁶ proposed that

6. Chomsky, N., (1957), pp. 35-37.

Postal's suggestion appears to be compatible with the derivation of pronominals⁹ (first and second person) wherein 'derived conjunction' might be involved. In a sentence like 12 'vayam' (we) may include 'tvam' and 'sa' (you and he) i.e. a hearer and a third person in addition to 'aham' (I) i.e. the speaker. Or it may include 'tvam' (you) i.e. the hearer only in addition to 'aham' (I). Thus sentence 12 may be derived from a structure underlying any of the sentences 13, 14, 15, 16.

12. vayam - yaamah
 we - go

13. aham - tvam - ca - yaavah
 I - you - and - go

(I and you go)

14. aham - sa - ca - yaavah
 I - he - and - go

(I and he go)

15. aham - tvam - sa - ca - yaamah
 I - you - he - and - go

(I, you and he go)

It may be noted that sentence 12 in the meaning of 13 or 14 or 15 may be interpreted in the sense of either 5 or 6 above (i.e. with the occurrence of 'saha' (together/with) or 'prthak' (each)). Similarly, a sentence like 16 may indicate plurality of hearers or it may be interpreted alternatively to include agents who are in addition to the hearer or hearers.

16. yuuyam - yaatha
 you - go

However, Postal's proposal poses a problem if sentence 12 is interpreted as sentence 17. Because, in this case, sentence 12 cannot be an instance of derived conjunction.

9. Lyons, J., (1969), pp.277-78.

17. aham - yaami
 I - go

Similarly, in the case of sentences with and without quantifiers, the problem continues. Consider sentences 18, 19, 20.

18. bahavah - chaatraah - saphalataam - icchanti
 many - students - success - desire

(many students desire success)

19. upas'atam - pustakaani - santi
 about hundred - books - are

(there are about hundred books)

20. s'atam - dars'akaah - aayaanti
 hundred - spectators - come

In sentences 18, 19 the quantifiers are not determinate to the number of units underlying 'bahavah' (many) and 'upas'atam' (about hundred).

Sentence 20 must have in its deep-structure that number of conjuncts which equal the number of units underlying a plural phrase. Thus sentences without quantifiers may have the same difficulty of interpretation as sentences with quantifiers without determinacy to the number (sentences 18, 19 above). Sentences like 21 with a quantifier which includes a fraction, also eludes solution.

21. saardha - pañca - aamraani - sthaalyaam - santi
 five and a half - mango (fruits) - in dish - are

(there are five and a half mangoes in the dish)

It is essential that the quantifier 'saardha - pañca' is introduced in the underlying structure.

Consider sentences like 22 and 23 with occurrences of conjoined NP's and identically collapsed NP's with/without a quantifier.

22. raamah - mohanah - ca - catvaari - pustakaani -
 r. - m. - and - four - books

aanayatah
bring

(r. and m. bring four books)

23. raamah - mohanah - ca - pustakaani - aanayatah
 r. - m. - and - books - bring

(r. and m. bring books)

Thus the quantifier 'catvaari' in sentence 22 allows a vague interpretation of underlying structures like 24, 25, 26.

24. (i) raamah - (ekam) pustakam - aanayati
 r. - (one) book - brings
- (ii) mohanah - triini pustakaani - aanayati
 m. - three books - brings
25. (i) raamah - (dve) pustake - aanayati
 r. - (two) books - brings
- (ii) mohanah - (dve) pustake - aanayati
 m. - (two) books - brings
26. (i) raamah - triini pustakaani - aanayati
 r. - three books - brings
- (ii) mohanah - (ekam) pustakam - aanayati
 m. - (one) book - brings

(It may be noted that singular and dual are inflexionally marked in Sanskrit)

In the case of sentence 23 above, the underlying structures may have occurrences of either two + one or one + two as quantifiers. In fact any combination of quantifiers above two is possible as the NP 'pustakaani' is indeterminate as to number.

V.3.3. Consider, next, sentences containing NP's which are 'pluralia tantum', like 27, 28.

27. tasya - daaraah - yaanti
 his - wife/wives - goes/go

(his wife goes/wives go)

In sentence 27 'daaraah' would normally mean wife only. But in sentence 27', the interpretation of sentence 27' as 'they love their wife' must be dropped (unless the society allows polyandry).

- 27'. te - daareṣu - snihyanti
 they - in wives - love

 (they love their wives)

In a sentence like 28, the NP 'praanaah' must be introduced in the underlying structure.

28. tasya - praanaah - nirgataah
his - lives - went out
(his life ended)

V. 3. 4. McCawley has proposed generalising the respectively-transformation to apply to 'cases where there is no conjunction but there are plural noun-phrases or rather noun-phrases with set-indices: pluralia-tantums do not allow 'respectively' unless they have a set-index.'¹⁰ However, the problems connected with plurals as instances of derived conjunction, as mentioned earlier, cannot be solved with the 'respectively' - transformation.

The 'respectively' - transformation operates on conjoined sentences (to which Conjunction Reduction rule has applied) in which neither of the sets of conjoined structures has undergone identical-conjunct collapsing. If these conditions are not met, the respectively-transformation is blocked. Thus a sentence like 29 can be derived through respectively transformation, but a sentence like 30 cannot be derived.

29. baalakah - baalikaa - paṭhati - khelati - ca - kramaśah
 boy - girl - reads - plays - and - respect-
 ively
 (the boy and the girl reads and plays respectively)

10. McCawley, J.D. (1968), p.150.

30. baalakah - baalikaa - ca - pathatah
 boy - girl - and - read

(the boy and the girl read)

It has been mentioned that the respectively-transformation can apply to conjoined plural NP's if they have a set-index. Thus a sentence like 31. can be derived through the respectively-transformation from a structure underlying sentence 31'. The respectively (i.e. 'kramaśah')-insertion takes place after conjunction-collapsing and sentence 31 is derived. However, if the books are black and blue simultaneously there is no conjunction involved in it and the 'kramaśah'-insertion would be barred as in sentence 31''.

31. pustakaani - kṛṣṇaani - niilaani - ca - santi-kramaśah
 books - black - blue - and-are-respectively

(the books are black and blue respectively)

- 31'. [[pustakaani - kṛṣṇaani - santi]
 S S books - black - are
 [pustakaani - niilaani - santi] - kramaśah]
 S S books - blue - are - respectively

- 31''. pustakaani - kṛṣṇaani - taani - niilaani - ca - santi
 books - black - these - blue - and - are

(the books are black and blue)

It may be noted that more than one 'kramaśah' (respectively) may occur in a sentence, though the number of this conjunct-element must be at least one less than the number of conjoined sets as in sentence 32.

32. raamah - mohanah - kramas'ah - landanam -
 r. - m. - respectively - to London
 amerikaam - ca - kramas'ah - ravivaasare - somavaasare -
 to America - and - respectively - on Sunday - on Monday
 ca - yaatah
 and - go

(r. and m. go to London and America (respectively) on Sunday and Monday respectively).

However, a sentence like 32 is ambiguous and may be interpreted either in the sense of sentence 5 or 6 above.

In Sanskrit, the conjunct-element 'kramas'ah' (respectively) may be optionally deleted if the members of the sets conjoined (i. e. occurrences of NP's and VP's conjoined) are equal in number. Thus in a sentence like 33, the conjoined NP's 'baalakaah - baalikaah' (boys and girls) and NP's 'pathanti - khelanti' (reads - play) are equal in their number of occurrences and may be interpreted as 'the boys and the girls read and play respectively' (I have not given an example with a verb which is inflexionally marked for singular and dual as it may be interpreted explicitly even without the occurrence of respectively).

33. baalakaah - baalikaah - ca - pathanti - khelanti -
 boys - girls - and - read - play
 ca - (kramas'ah)
 and - respectively
 (the boys and girls read and play (respectively))

However, in a sentence like 34 the conjoined NP's 'dadhi - bhaktam - ca' (curd and rice) would be normally interpreted as a joint-NP¹¹ (though this interpretation is dependent on non-linguistic fact), unless there is an occurrence of 'kramas'ah' (respectively) in the sentence.

34. raamah - mohanah - ca - dadhi - bhaktam - ca -
 r. - m. - and - curd - boiled rice - and -
 khaadatah
 eat
 (r. and m. eat curd and (boiled) rice).

11. McCawley, J.D. (1968), p.152.

The conjunct-element 'kramas'ah' (respectively) may be substituted by 'sviiya' (respective) a modifier of the conjoined set as in sentence 27" (cf. sentence 27').

27". te - sviiyeṣu - daareṣu - snihyanti
 they - (in) own - (in) wives - love

(they love (their) respective wives)

V.3.5. In the above sub-sections (V.3.2, V.3.3, V.3.4) it has been shown why sentences with verb forms in plural cannot be accepted as instances of derived-conjunction. In this section further evidence will be given as to why derived conjunction, as advocated by Chomsky and Gleitman (V.3.1), cannot be the only source of conjoined structures.

Consider a sentence like 35 which contains a joint-NP and which cannot be derived from two underlying structures as the NP 'samah' (similar) cannot occur in a sentence like 36.

35. raamah - mohanena - samah - asti
 r. - with m. - similar - is

(r. is similar to m.)

36. * raamah / mohanah - samah - asti
 r. / m. - similar - is

Some verbs and adjectives need the cooccurrence of what McCawley refers to as joint and non-joint NP's. In sentences 37 and 38, 'samaanau' (in 37) refers to joint NP's and 'gaurau' (in 38) refers to non joint NP's. Sentence 37' (i), (ii) is unacceptable.

37. harih - mohanah - ca - samaanau - stah
 h. - m. - and - similar - are

(h. and m. are similar)

38. guruh - chaatrah - ca - gaurau - stah
 teacher - student - and - fair - are

(the teacher and the student are fair)

- 37'.(i) * harih - samaanah - asti
 h. - similar - is

- (ii) * mohanah - samaanah - asti
 m. - similar - is

The verbs may have other selectional features as well: (i) a verb like 'aasliṣyati' (embraces) presupposes joint-NP's but not necessarily reciprocity as in sentence 39. A sentence like 40, unless in a discourse, is not acceptable. The absence of reciprocity implied in sentence 39 is clear from sentence 39' which is a possible continuation of sentence 39.

39. sa - taam - aasliṣyati
 he - her - embraces

(he embraces her)

- 39'. sa - taam - aasliṣyati - parantu - saa - tam -
 he - her - embraces - but - she - him

taadayati
 beats

(he embraces her but she beats him)

40. * sa - aasliṣyati
 he - embraces

(ii) a verb like 'milati' (meets) presupposes both joint NP's and reciprocity as in sentence 41. A sentence like 41' is unacceptable.

41. raamah - mohanam - amilat
 r. - m. - met

(r. met m.)

- 41'. * raamah - mohanam - amilat - parantu - mohanah
 r. - m. - met - but - m.

raamam - no - amilat
 r. - not - met

(r. met m. but m. did not meet r.)

(iii) A verb like 'mis'rayati' (mixes) presupposes joint NP's in addition to and separate from an Agentive.

42. gopah - dugdham - jalam - ca - mis'rayati
 milkman - milk - water - and - mixes

(the milkman mixes milk and water)

A sentence like 42', unless as an ellipsis or in discourse, would be unacceptable. It may be noted that a sentence like 42'' is not possible unless an agent is assumed (i.e. 42'' is elliptical)

42' (i) * gopah - jalam - mis'rayati

(ii) * gopah - dugdham - mis'rayati
 milkman - water/milk - mixes

42''. * dugdham - jalam - ca - mis'rayati
 milk - water - and - mixes

(iv) A verb like 'yaati' (goes) can cooccur with either joint-NP's or non-joint-NP's as in sentences 5 and 6 above.

(v) An adjective like 'gaurah' (fair) cooccurs with non-joint-NP's only as in sentence 38 above. Sentence 38' is also acceptable.

38'. guruh / chaatrah - gaurah - asti
 teacher / student - fair - is

(the teacher/student is fair)

It is apparent that the joint and non-joint readings of sentences¹² are related to phrasal and derived conjunctions, respectively. However, McCawley, later on, substitutes this joint and non-joint feature of NP's with 'individual index' and 'set index' of verbs.¹³ But this distinction can, still, be related to that between phrasal and derived conjunctions.

12. McCawley, J.D., (1968), p.161.

13. McCawley, J.D., (1968), pp.161-62.

V.4.1. From the above, and as mentioned earlier, it appears correct to accept Lakoff and Peters' distinction between phrasal conjunction and derived conjunction. In other words, there are structural differences in the underlying forms of these two conjunctions. The coordinate conjoined NP's in sentence 4 above, if interpreted as phrasal conjunction (sentence 5), would be generated in the base by a rule like $NP \rightarrow NP^n$, on the other hand if interpreted as derived conjunction as in sentence 6 above, would be generated by a conjunction-reduction transformation from underlying conjoined sentences (6') by a rule like $S \rightarrow S^n$.

61. [[raamah - yaati] - [mohanah - yaati] - ca]
 S S S S S S
 r. - goes - m. - goes - and

44. guruh - chaatrena - yudhyati
 teacher - with student - fights
45. chaatrah - gurunaa - yudhyati
 student - with teacher - fights

(the student fights with the teacher)

It is discussed later on (V. 7. 1.) whether sentences like these (43-45) are true parallels. Lakoff & Peters would derive 44, 45 from 43 by the Conjunct Movement transformation.

Lakoff & Peters' position in favour of both phrasal and derived conjunction is expressed by Dougherty by postulating two rules:¹⁶

- (i) $S \rightarrow S^n$, (ii) $NP \rightarrow NP^n$, for the categorial component of the base.

V. 4. 2. The above proposals of linguists like Gleitman, McCawley and Lakoff & Peters have been referred to as the 'Conjunction Reduction hypothesis'.¹⁷ This hypothesis is distinguished, by Dougherty, from his own which he refers to as the Phrase Structure Rule (PSR) Hypothesis. However, the rules¹⁷ proposed in the PSR Hypothesis indicate that he accepts that both phrasal conjunction and derived conjunction are necessary. According to him, sentences like 43 and 44 are not transformationally related and are derived from the structures underlying 43', 44' respectively.

16. Dougherty, R.C., (1971), p. 299.

17. Dougherty, R.C., (1970), p. 851.

43'. I I I guruh I chaatrah I - ca I I yudhyatah I I
 S NP NP NP NP VP S
 teacher - student - and - fight

44'. I I guruh I I I yudhyati I I chaatrena I I I
 S NP VP PP VP S
 teacher - fights - with student

I do not propose to discuss the PSR Hypothesis as such. My aim, in making reference to it, is to point out the postulation of phrasal and derived conjunction implied in the rules. I intend to discuss phrasal conjunction in relation to the comitative case as proposed by Fillmore.¹⁸ But before taking that, it is appropriate to refer to some characteristics of derived conjunction.

V.5.1. Conjoined structures (i.e. S's) are subject to a Conjunction Reduction rule which applies optionally. It conjoins instances of the same case and V's in the conjoined structures. An Identical-Conjunct-Collapsing rule collapses the identical items under a constituent. Conjoined structures like 46, 47 are represented in figures III and IV* respectively. The Conjunction Reduction rule applies to 46 and 47 (as represented in figures III and IV*) optionally. We get the structures as represented in figures III', IV' (from figures III, IV) respectively. The Identical conjunct-collapsing rule applies to the configuration in figure IV' and we obtain the structure as represented in figure IV". Only sentence 46 will be described through its derivation, as, apart from conjunction-reduction, and identical-conjunct-collapsing, the same rules will apply to the derivations of 47 also.

18. Fillmore, C.J., (1968a), pp.81-83.

46. [[raamah - pathati] [mohanah - khelati] - ca]
 S S A S S A S S
 r. - reads m. - plays - and
47. [[raamah - pathati] [mohanah - pathati] - ca]
 S S A S S A S S
 r. - reads m. - reads - and

Figure III

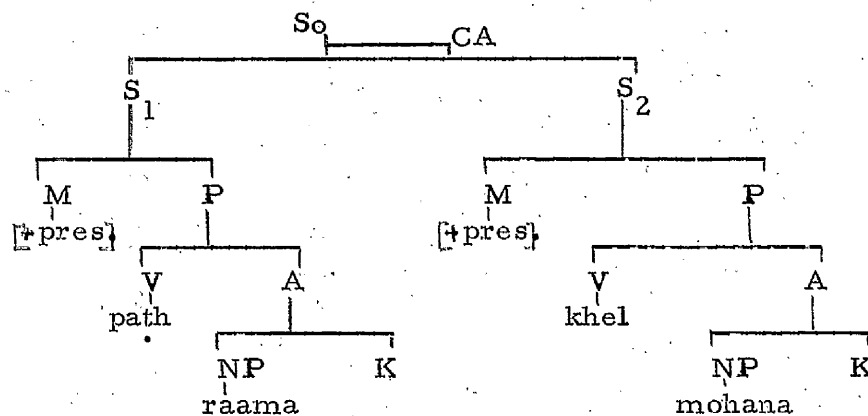


Figure IV

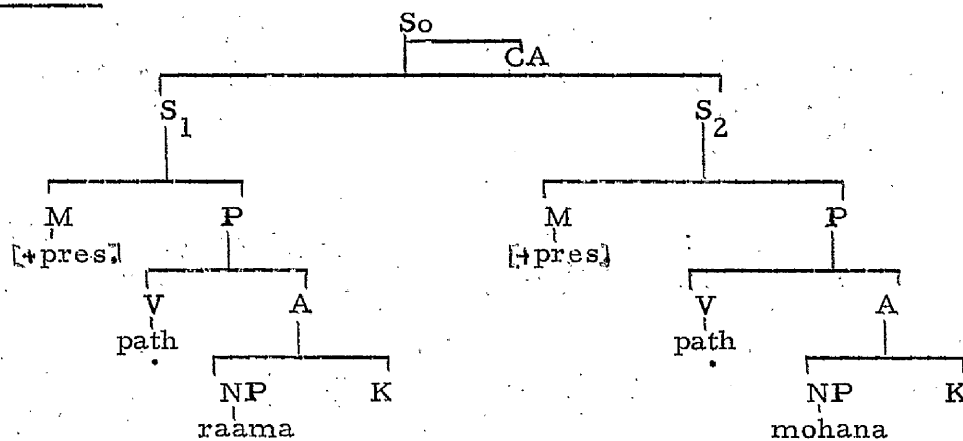


Figure III'

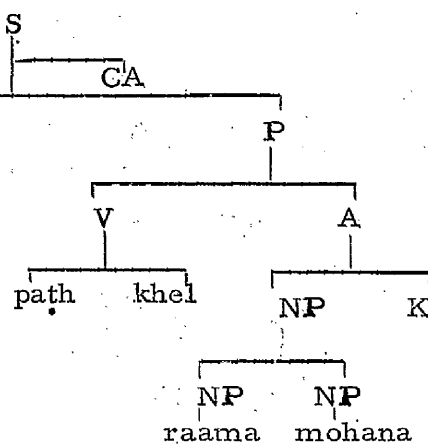
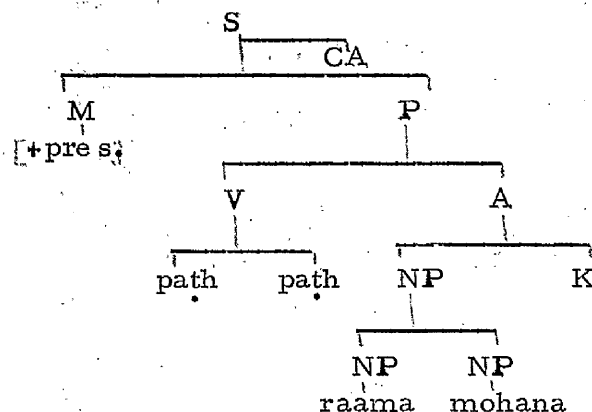
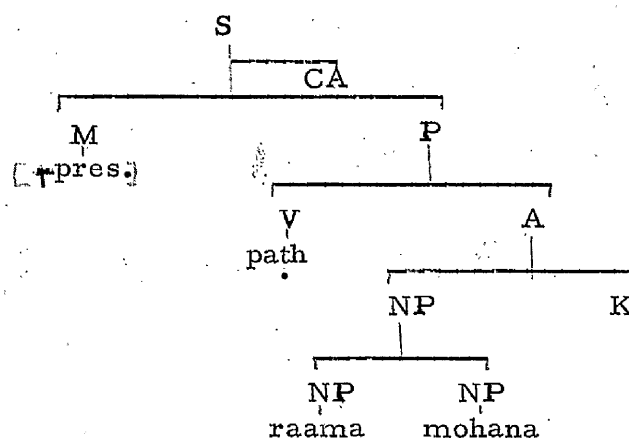


Figure IV'Figure IV''

A Conjunction-Spreading rule¹⁹ applies to III, III' and IV and IV'': in items under III the conjunction-element 'ca' (and) is attached after each of the/V's and A's in S_1 and S_2 and a subsequent 'ca'-deletion rule deletes optionally and alternatively (i) 'ca' after the A's, (ii) 'ca' after the V's, (iii) all occurrences of 'ca' in S_1 and S_2 except the occurrence of 'ca' after A in S_2 , (iv) all occurrences of 'ca' in S_1 , S_2 except the occurrence of 'ca' after V in S_2 . The result is as represented in figures V, VI, VII, VIII, IX. Similar processes (regarding 'ca'-spreading and 'ca'-deletion) apply to figure IV also.

19. cf. McCawley, J.D., (1970), p. 296: he mentions a Conjunction Distribution rule.

In so far as figures III' and IV'' are concerned, the Conjunction-Spreading rule attaches 'ca' after each conjunct (provided the number of conjuncts is more than one) under a constituent (i. e. A/V) (thus no 'ca' is attached after the V in figure IV''). A subsequent 'ca'-deletion rule optionally deletes all occurrences of 'ca' except the rightmost occurrence of 'ca' (i) under V and (ii) under A. The result is as in figures X, XI, XII, XIII. Only sentence 46 is described through all stages of its derivation, as the same rules will apply to the derivations of 47.

Figure V

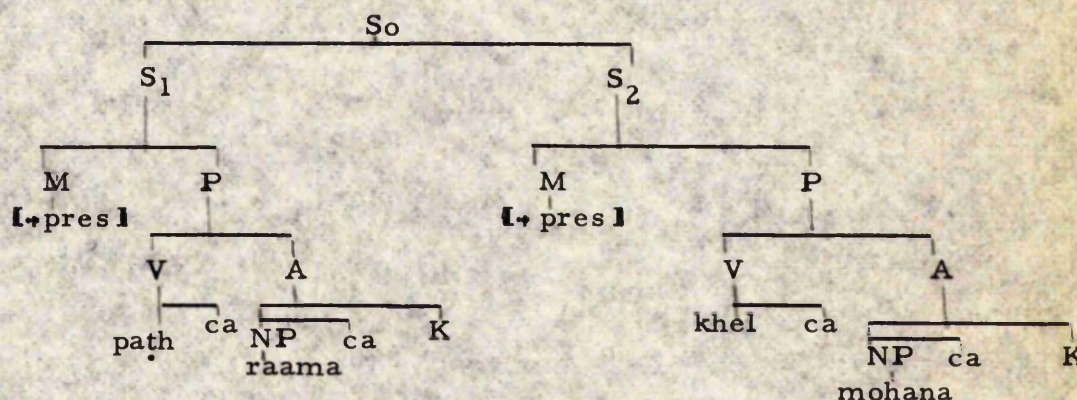


Figure VI

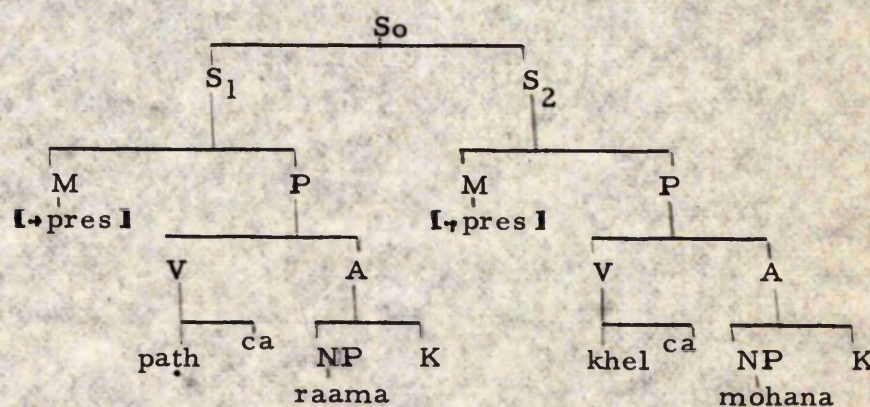


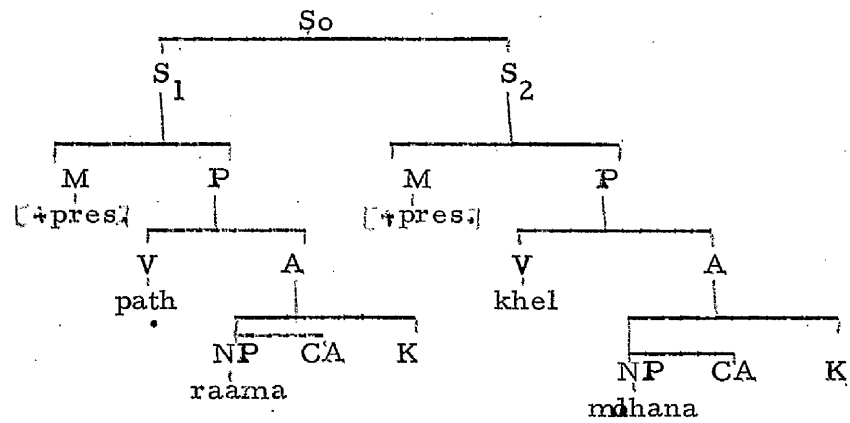
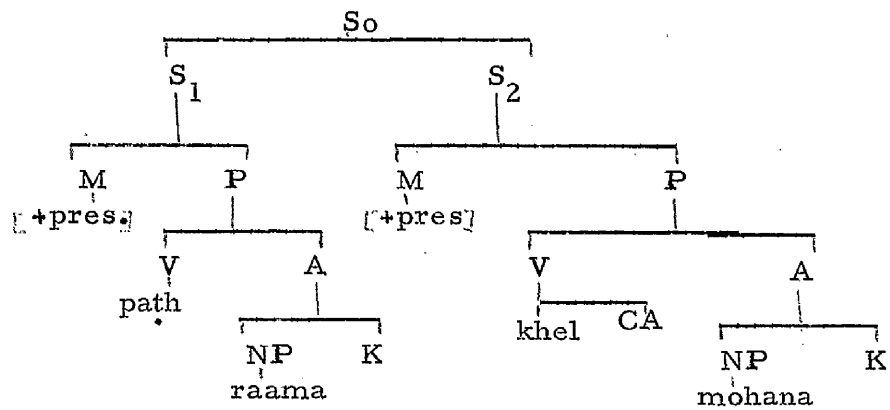
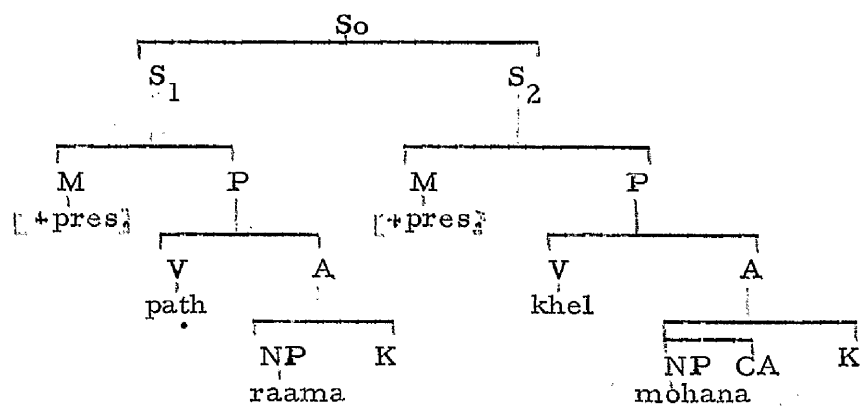
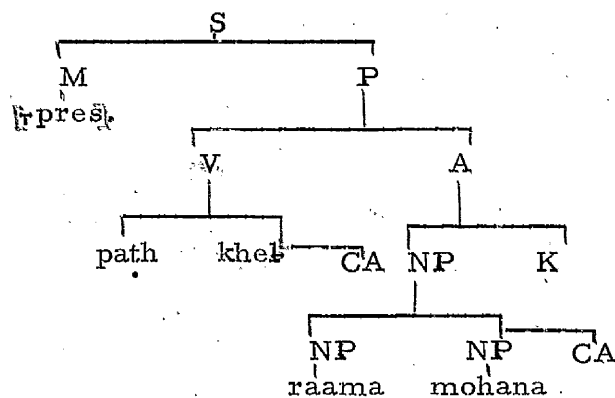
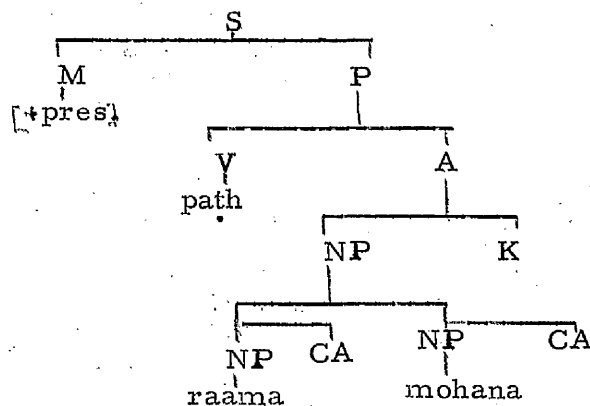
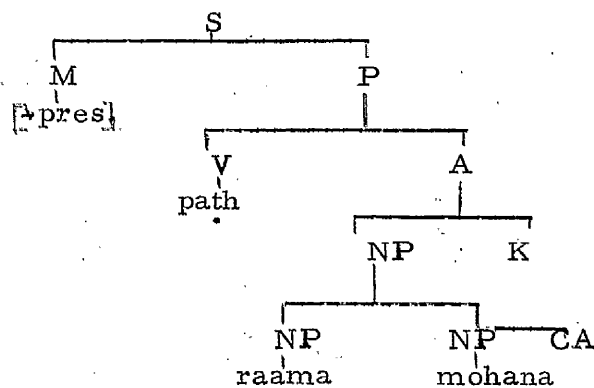
Figure VIIFigure VIIIFigure IX

Figure XIFigure XIIFigure XIII

Now the 'kramas'ah' (respectively) - transformation may optionally²⁰

20. If the conjoined structure has the same number of conjoined NP's as that of the V's (and the Identical-Conjunct-Collapsing rule has not applied), the respectively-interpretation may be presumed.

apply (provided as mentioned earlier the Identical-Conjunct-collapsing rule has not applied after the application of the Conjunction Reduction rule) and attach 'kramas'ah' to P. Thus, 'kramas'ah' may be attached to P, in figures X, XI only. It does not apply to figures V - IX as the Conjunction-Reduction rule has not applied to them and it does not apply also to figures XII, XIII as the Identical-Conjunct-Collapsing rule has allowed collapsing of items in these configurations. (As mentioned earlier figures X - XIII are not taken up for further derivation as the rules which apply to V - IX apply to them also. Even in among the figures V - IX only figure VI is taken up for further derivation as the same derivational process follows in the case of figures V, VII - IX.).

The subjectivalisation rule applies (to the configuration in VI) and A is selected for agreement with the V. If the subjectivalisation rule does not apply, the process of passivisation without subjectivalisation would follow. The result is as represented in figures XIV and XV respectively (from figure VI).

Figure XIV

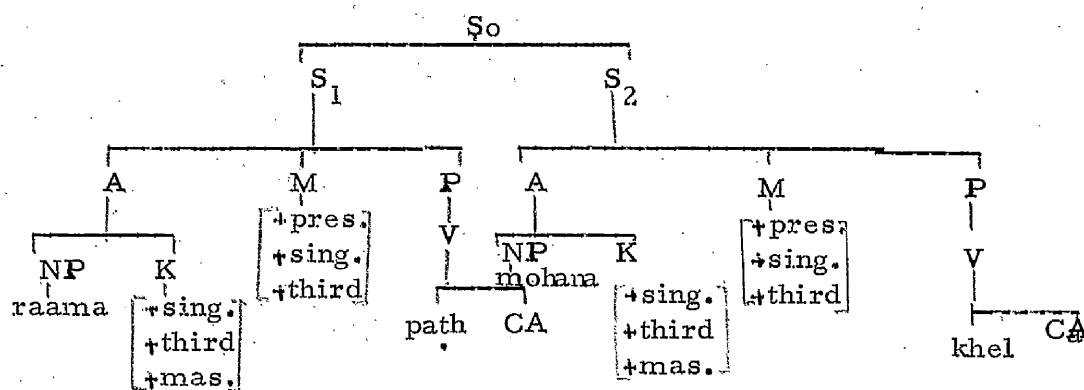
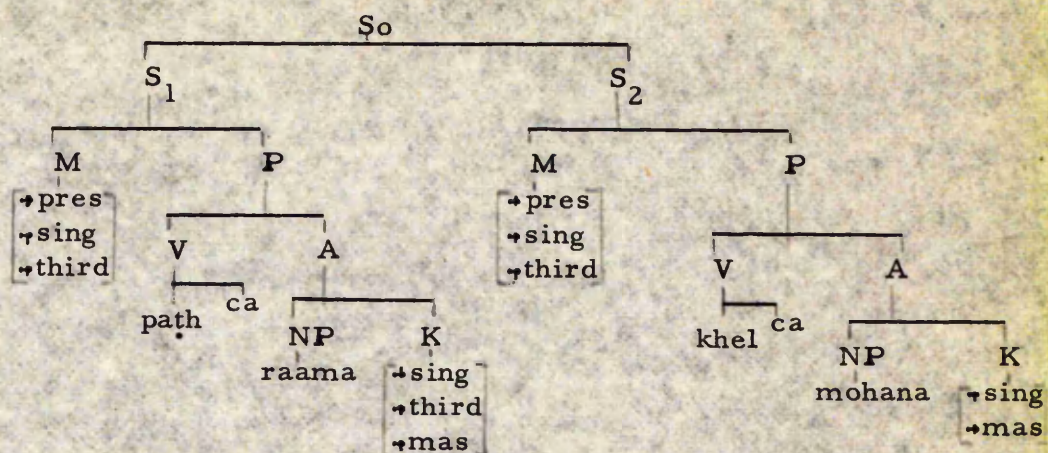


Figure XV

The affix-substitution rule replaces the features with affixes and the final forms are as represented in figures XVIII, XIX via XVI, XVII respectively.

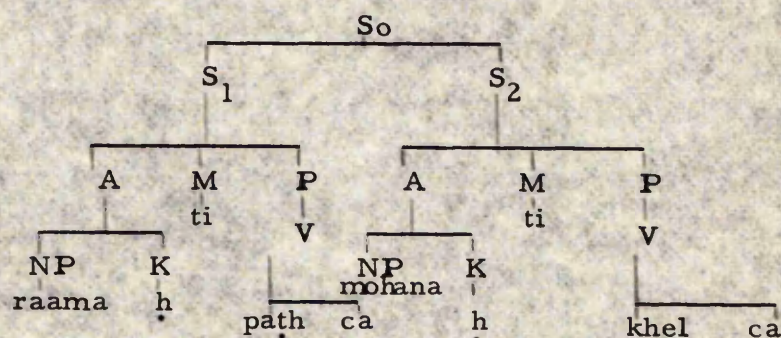
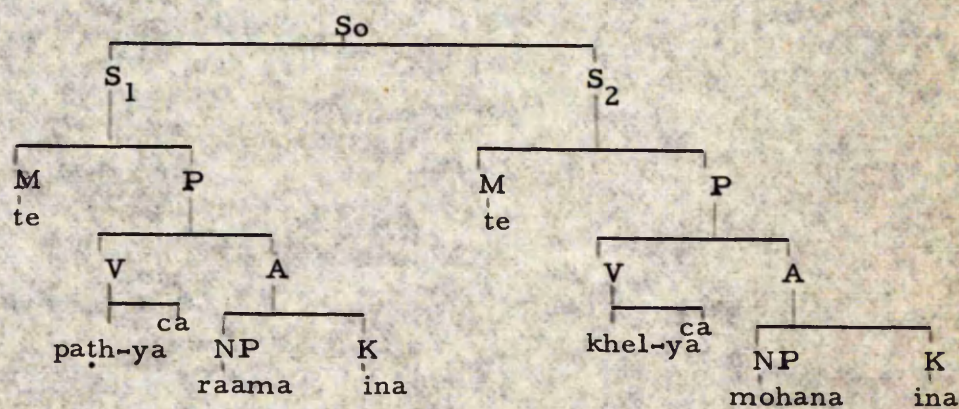
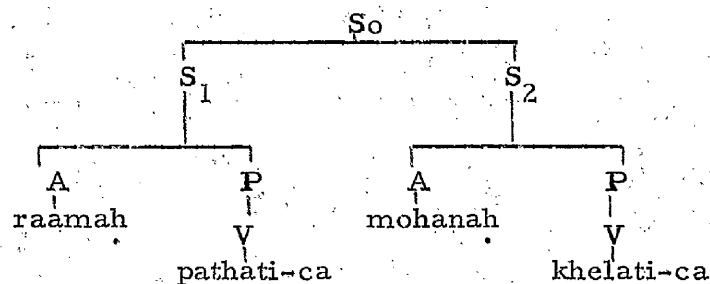
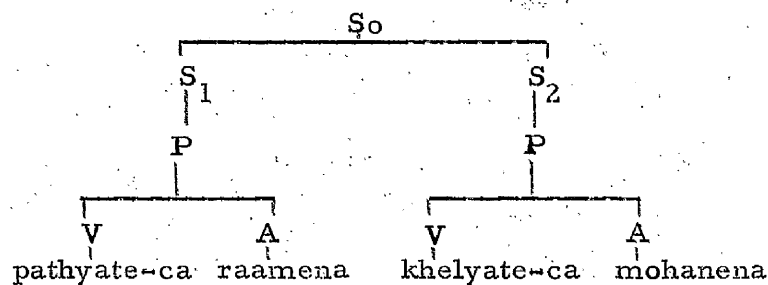
Figure XVIFigure XVII

Figure XVIIIFigure XIX

Thus, the conjoined-structure in 46 is realised as in sentences 48, 48'. The alternative forms (from figures V, VII, VIII, IX) are as in 49, 50, 51, 52. Similarly, we would get sentences 53, 54, 55, 56 from figure X, XI, XII, XIII respectively.

48. raamah - pathati - ca - mohanah - khelati - ca
 A A
 r. - reads - and - m. - plays - and
 (r. reads and m. plays)

48'. raamena - pathyate - ca - mohanena - khelyate - ca
 A A
 by r. - is read - and - by m. - is played - and
 (it is read by r. and is played by m.)

49. raamah - ca - pathati - ca - mohanah - ca - khelati - ca
 r. - and - reads - and - m. - and - plays - and

50. raamah - ca - pathati - mohanah - ca - khelati
 r. - and - reads - m. - and - plays

51. raamah - pathati - mohanah - khelati - ca
 A A
 r. - reads - m. - plays - and

52. raamah - pathati - mohanah - ca - khelati
 A A
 r. - reads - m. - and - plays
 all = (r. reads and m. plays)
53. raamah - ca - mohanah - ca - pathati - ca - khelati -
 A A
 r. - and - m. - and - reads - and - plays
 ca - (kramas'ah)
 and -
54. raamah - mohanah - ca - pathati - khelati - ca - (kram-
 A A as'ah)
 r. - m. - and - reads - plays - and
 both = (r. and m. reads and plays respectively)
55. raamah - ca - mohanah - ca - pathatah
 A A
 r. - and - m. - and - read
56. raamah - mohanah - ca - pathatah
 A A
 r. - m. - and - read
 both = (r. and m. read)

V. 5. 2. Now the rules operating in the above derivations may be summarised as follow:

- (i) A Conjunction Reduction rule applies optionally and conjoins instances of the same case and V's in the conjoined structures (figures III', IV').
- (ii) An Identical-Conjunct-Collapsing rule applies and collapses the identical items under a constituent obligatorily. (figure IV'').
- (iii) A 'kramas'ah' (respectively)-attachment rule applies optionally in case rule (i) has applied but no collapsing of identical items under a constituent has taken place (by rule ii). However, if the identically collapsed items under a case-category are marked with set-indices,

'kramas'ah' attachment can take place even if rule (ii) above has applied.

(iv) A Conjunction-Spreading rule applies in two ways.

(a) It attaches 'ca' after each V and A in $S_1 \dots S_n$ (figure V).

(b) It attaches 'ca' after each conjunct (provided the number of conjuncts is more than one) under a constituent (i. e. A/V) (figure X).

(v) A 'ca' - deletion rule operates as follows:

(1) In case rule (iva) has operated, the rule deletes optionally and alternatively (I) 'ca' after the A's, (II) 'ca' after the V's, (III) all occurrences of 'ca' in S_1 and S_2 except the occurrence of 'ca' after A in S_2 , (IV) all occurrences of 'ca' in S_1 , S_2 except the occurrence of 'ca' after V in S_2 . (figures V - IX).

(2) In case rule (ivb) has operated, the rule deletes optionally all occurrences of 'ca' except the rightmost occurrence of 'ca' under V and A. (figures X - XIII).

(vi) The subjectivalisation-rule applies optionally. (figures XIV - XV).

(vii) The affix-substitution rule applies obligatorily and replaces features with affixes (figures XVI, XVII).

V. 5. 3. There are a few points in connection with derived conjunction which need to be mentioned.

Elided sentences are possible as the second component of a conjoined structure, but not as the first. Thus sentence 57 is acceptable but not 58.

57. raamah - pathati - mohanah - ca - api
r. - reads - m. - and - too

(r. reads and (so does) m., too).

58. * mohanah - ca - api - raamah - pathati
m. - and - too - r. - reads

There are constraints on conjoining different sentence-types.

The intuitive response of a Sanskrit speaker would not be in favour of conjoining interrogative and imperative sentence types like 59.

59. * kutra - tvam - yaasi ? dvaaram - ca - pidhehi
where - you - go ? door - and - shut

(where are you going ? and shut the door).

It has been mentioned that subjectivalisation-rule is optional (V.5.2: rule vi). Now, in case it does not apply and the process of passivisation with/without subjectivalisation operates then it applies to both or either of conjoined structures on the condition that rule (ii) (V.5.2) has not applied. In case rule (ii) has applied, the process of passivisation applies to all the items under a constituent (sentences 61, 62, 63).

Sentences 60, 60', 61, 62, 63 are acceptable, but not 61', 62', 63'.

60. raamah - pathati - mohanena - khelyate - ca
A nom A i
r. - reads - by m. - is played - and

(r. reads and (it) is played by m.)

- 60'. raamena - pathyate - mohanah - khelati - ca
A i A nom
by r. - is read - m. - plays - and

((it) is read by r. and m. plays)

61. raamena - mohana - nena - ca - pathyate
A i A i
by r. - by m. - and - is read

((it) is read by r. and m.)

- 61'. * raamena - mohanah - ca - pathyate/pathati
 A i A nom
 by r. - m. - and - is read/reads
62. raamena - pathyate - khelyate - ca
 A i
 by r. - is read - is played - and
 ((it) is read and played by r.)
- 62'. * raamena - pathati - khelyate - ca
 A i
 by r. - reads - is played - and
63. raamena - mohanena - ca - pathyate - khelyate - ca
 A i A i
 by r. - by m. - and - is read - is played - and
 ((it) is read and played by r. and m.)
- 63'. * raamah - mohanena - ca - pathati - khelyate - ca
 A nom A i
 r. - by m. - and - reads - is played - and

V.6.1. Derived conjunction, as outlined above, is distinct from phrasal conjunction which Fillmore relates to the Com(itative) case.²¹ He proposes a rule like $NP \rightarrow NP + C$ wherein the NP on the left hand side may be dominated by one of the 'various-case categories'.²² A phrasal conjunction under Com is characterised in the underlying structure, by the occurrence of the PP 'saha'²³ (with) which may also be present in surface-structure optionally, when it occurs with/without ca (sentences 64', 65'-65''') (it may be

-
21. Fillmore, C.J. (1968a) p. 81: 'there may be a relationship between conjunction of NP's and what one might wish to refer to as a Comitative case'.
22. Fillmore, C.J., (1968a), p. 82.
23. 'saha' is a cover term for (i) 'saakam', (ii) 'saardham' (iii) 'samam' (iv) 'saha' all of which mean 'with'.

noted that this proposal of 'saha' being in the underlying structure is tentative) consider sentences like 64, 64', 65, 65', 65'', 65'''.

64. raamah - gurunaa - saha - yaati
A nom Com i
r. - with teacher - with - goes

64'. raamah - gurunaa - yaati
A nom Com i
r. - with teacher - goes

both = (r. goes with the teacher)

65. guruh - ca - raamah - ca - saha - yaatah
A nom A nom
teacher - and - r. - and - with - go

65'. guruh - ca - raamah - ca - yaatah
A nom A nom
teacher - and - r. - and - go

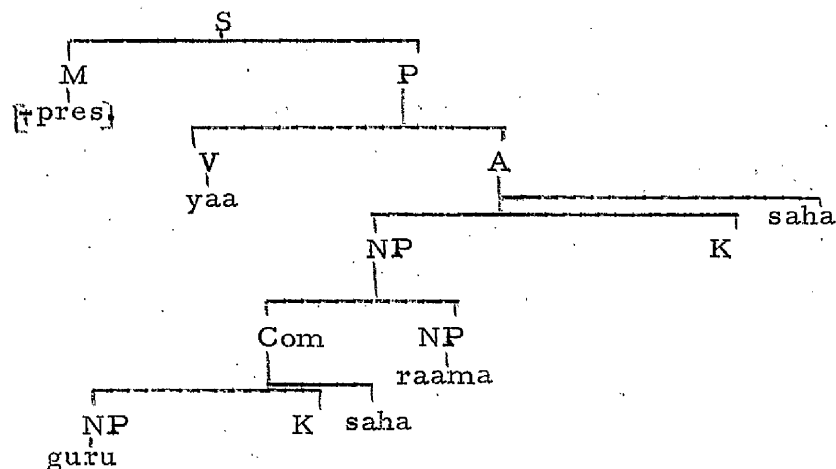
65''. guruh - raamah - ca - saha - yaatah
A nom A nom
teacher - r. - and - with go

65'''. guruh - raamah - ca - yaatah
A nom A nom
teacher - r. - and - go

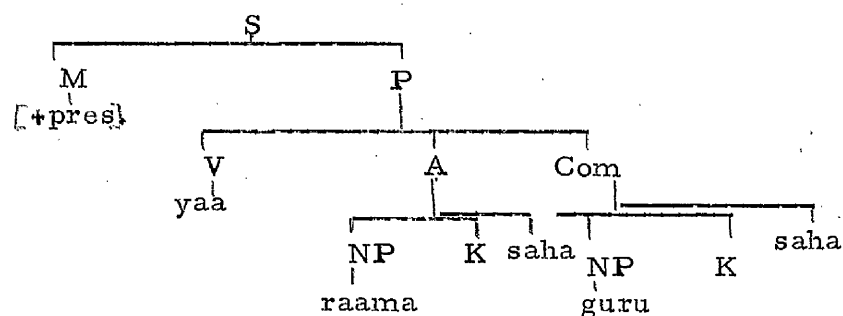
all = (the teacher and r. go together)

V.6.2. It is proposed to discuss the derivation of sentences like 64, 65 after Fillmore,²⁴ in the first instance. Problems and inadequacies arising therein will be taken up subsequently. Sentences 64, 64', 65' 65' have the underlying structure as in figure XXX.

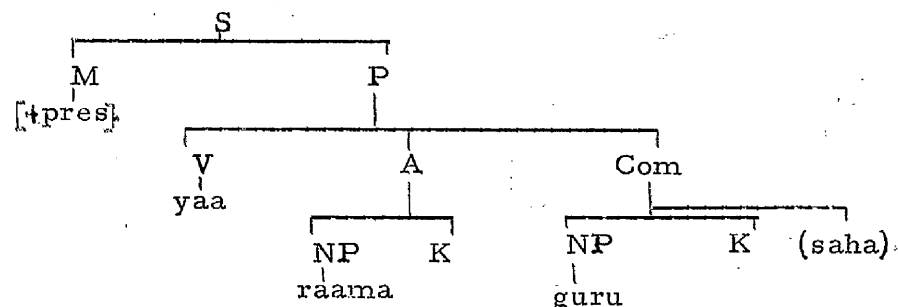
24. Fillmore has not given a detailed description. The process outlined below is an attempt to follow him as closely as his outline permits.

Figure XXX

A Com-promotion rule applies optionally and selects Com for promotion and the result is as represented in figure XXXI

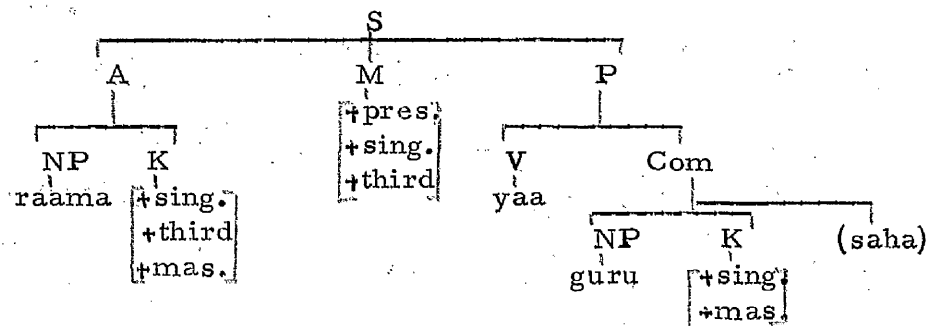
Figure XXXI

Now, at the stage of figure XXXI a 'ca' - attachment rule cannot apply as there is only one occurrence of NP under the node A/Com. A 'saha'-deletion rule deletes 'saha' under A obligatorily and that under Com optionally. The result is as represented in figure XXXII

Figure XXXII

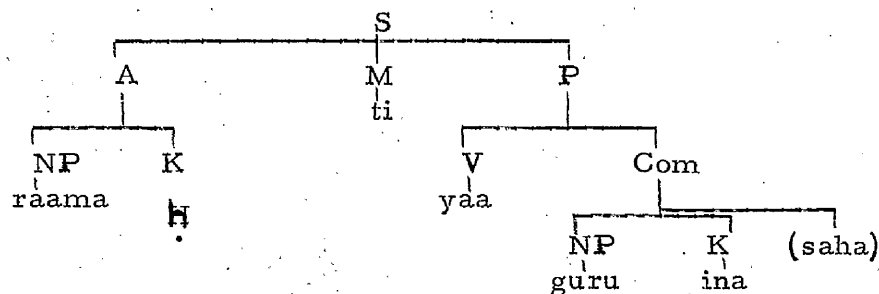
The Subjectivalisation-rule selects A for agreement with the V (it may be noted that even if the subjectivalisation-rule does not select A, Com cannot be selected for agreement with the V). The result is as represented in figure XXXIII.

Figure XXXIII



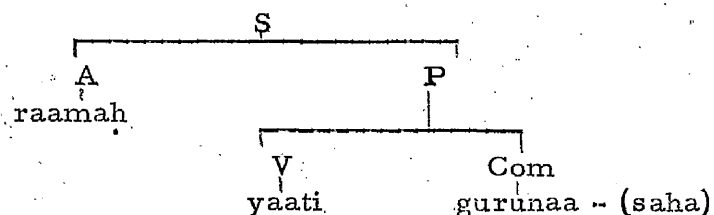
The affix-substitution rule replaces features with affixes and the result is as represented in figure XXXIV.

Figure XXXIV



The final form is as represented in figure XXXV from which we obtain sentences 64, 64'.

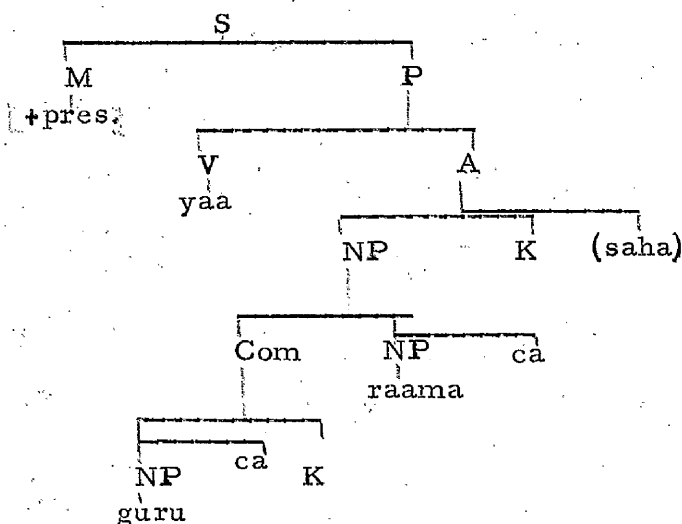
Figure XXXV



Alternatively, at the stage of figure XXX, Com is not selected for promotion. The 'ca'-attachment rule attaches 'ca' after each NP dominated by A, the 'saha'-deletion rule deletes the rightmost 'saha'

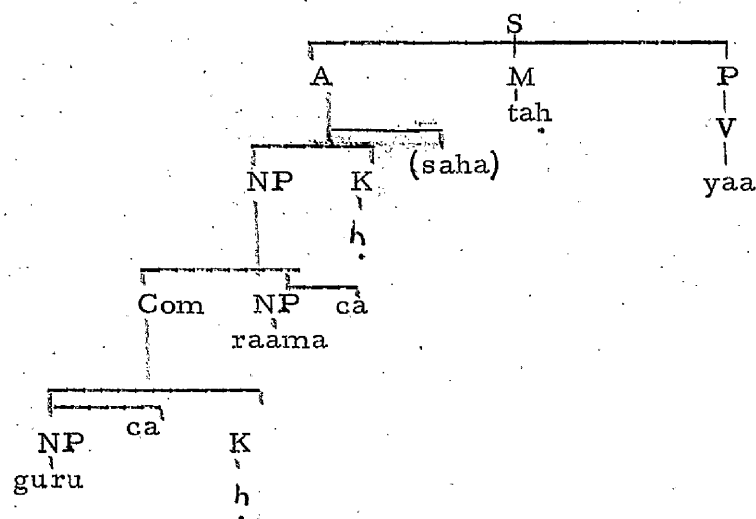
optionally and the other 'saha' obligatorily under A. The result is as represented in figure XXXVI (omitting irrelevant details)

Figure XXXVI

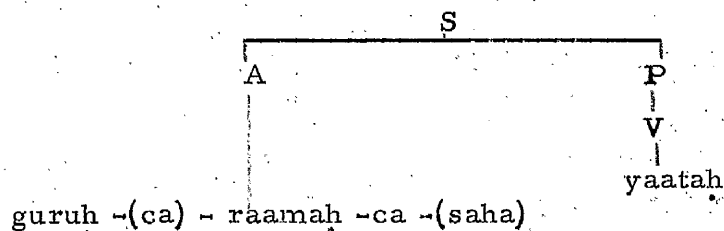


The Subjectivisation-rule selects A for agreement with the V and the affix-substitution rule replaces features with affixes. The result is as represented in figure XXXVII (omitting irrelevant details).

Figure XXXVII



A 'ca'-deletion-rule applies optionally and deletes all occurrences of 'ca' except the rightmost. The final form is as represented in figure XXXVIII from which we obtain sentences 65, 65', 65'', 65'''.

Figure XXXVIII

V.6.3. Now the rules involved in the above derivation may be summarised as follows:

1. A Com-promotion rule applies optionally and selects Com for promotion.
2. A 'ca'-attachment rule operates as follows: It attaches 'ca' (i) under the case-category dominating Com, (ii) under the case-category which has dominated Com (and now no longer dominates it as a result of the operation of rule 1 above), (iii) and under Com; on the condition that there is more than one occurrence of NP under these nodes.

Whenever 'ca' is attached to a node it will be, by a convention, attached after each NP dominated by the node.

3. A 'saha'-deletion rule operates as follows:
 - (i) if there is more than one occurrence of 'saha' under the node X (where X is a case-category), it deletes all occurrences of 'saha' obligatorily except the rightmost occurrence which it deletes optionally. (figure XXXVI).
 - (ii) If there is only one occurrence of 'saha' under the node X, it deletes 'saha' (a) optionally if X = Com (and it is not dominated by a case-category), and (b) obligatorily elsewhere. (figure XXXII).

4. The Subjectivalisation-rule applies optionally.

5. The affix-substitution rule applies and replaces features with affixes obligatorily.
6. A 'ca' - deletion rule deletes optionally all occurrences of 'ca' except the rightmost, under a node.

V.6.4. Now consider sentence 66 along with 64, 65 above.

66. guruh - raamena - saha - yaati
 nom i
 teacher - with r. - with - goes
 (the teacher goes with r.)

As mentioned earlier (f.n. 21), Fillmore accepts that there is some connection between conjunction and comitative uses of NP's. With reference to Jespersen, he remarks that sentences like 64, 65 above are 'parallel'²⁵ and proposes to derive sentences equivalent to 64, 65 from the same deep-structure.²⁶ Following his proposal, sentence 66 also should, presumably, be considered 'parallel' to 64, 65 and accordingly derived from the same deep-structure, though Fillmore himself says nothing in this connection.

Recall the structure underlying sentences 64, 65, as represented in figure XXX. In so far as sentence 66 is concerned, there are two ways of deriving it: (i) either there is an underlying structure (different from the one in figure XXX) in which the node Com dominates 'raama' in place of 'guru'; (ii) or there is a rule to allow the mutual shifting of the Com and A nodes. If the former is accepted, the generalisation that sentences 64, 65, 66 are parallels is lost and besides, it leads to

25. Fillmore, C.J., (1968a), p.81: "Jespersen noticed the parallels between with (a proposition which has a comitative function) and the conjunction 'and'."

26. Fillmore, C.J., (1968a), pp. 82-83.

an unreasonable proposition that sentences 64, 65 are 'parallels' but not 64, 66/65, 66/64, 65, 66. If the latter course is adopted, it makes the postulation of the different nodes A and Com trivial. This problem of the derivation of a sentence like 66 is discussed later (V.7.1). Here, it is sufficient to mention that, following Fillmore, sentences 64, 65, 66 need to be derived from the same underlying structure, and point out the problem therein.

V.6.5. Now consider sentences 67-73 which contain recursion of Com.

67. raamah - mohanena - (ca) - gurunaa - ca - (saha) - yaati
 A nom Com i Com i
 r. - with m. - and - with teacher - and - with - goes
 (r. goes with m. and the teacher)

68. mohanah - ca - guruh - ca - raamah - ca - (saha) - yaanti
 A nom A nom A nom
 m. - and - teacher - and - r. - and - with - go

68'. mohanah - guruh - raamah - ca - (saha) - yaanti
 m. p teacher - r. - and - with - go

both = (r., m., and the teacher go)

69. mohanah - raamena - ca - gurunaa - ca - saha - yaati²⁷
 A nom Com i Com i
 m. - with r. - and - with teacher - and - with - goes
 (m. goes with r. and the teacher)

70. guruh - mohanena - ca - raamena - ca - saha - yaati
 A nom Com i Com i
 teacher - with m. - and - with r. - and - with - goes
 (the teacher goes with m. and r.)

71. mohanah - (ca) - raamah - ca - gurupaa - (saha) - yaatah
 A nom A nom Com i
 m. - and - r. - and - with teacher - with - go
 (m. and r. go with the teacher)

27. The alternative forms of 69-73, like that of 67, 68 are possible. But, in order to avoid multiplicity of alternative forms, they are not given.

72. guruh - (ca) - raamah - ca - mohanena - (saha) - yaatah
 A nom A nom Com i
 teacher - and - r. - and - with m. - with - go

 (the teacher and r. go with m.)

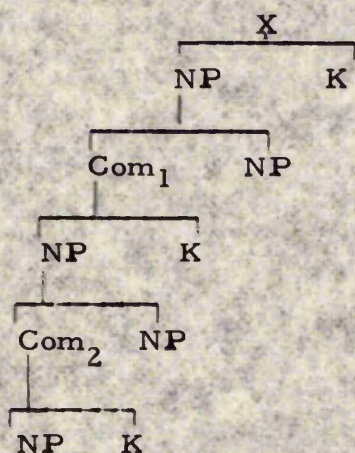
73. mohanah - ca - guruh - ca - raamena - saha - yaatah
 A nom A nom Com i
 m. - and - teacher - and - with r. - with - go

 (m. and the teacher go with r.)

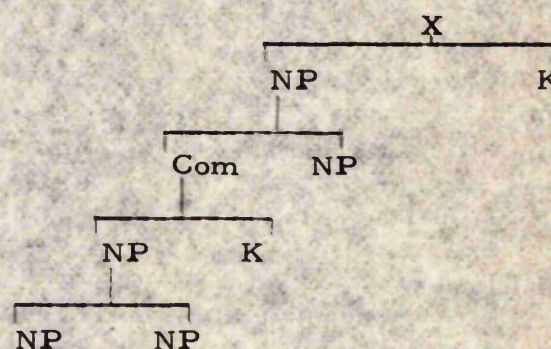
Fillmore has not taken up any example like 67, 68 wherein the rule introducing Com may apply recursively. We take up the derivation of 67, 68 in the first instance (and leave out 69-73) and will see how the proposal of Fillmore which has been followed in the derivation of sentences 64, 65 above (recall that sentence 66 has posed a problem with the proposed derivation), works.

The recursion of Com under a case-category X may be represented in either of two ways (a) and (b) below.

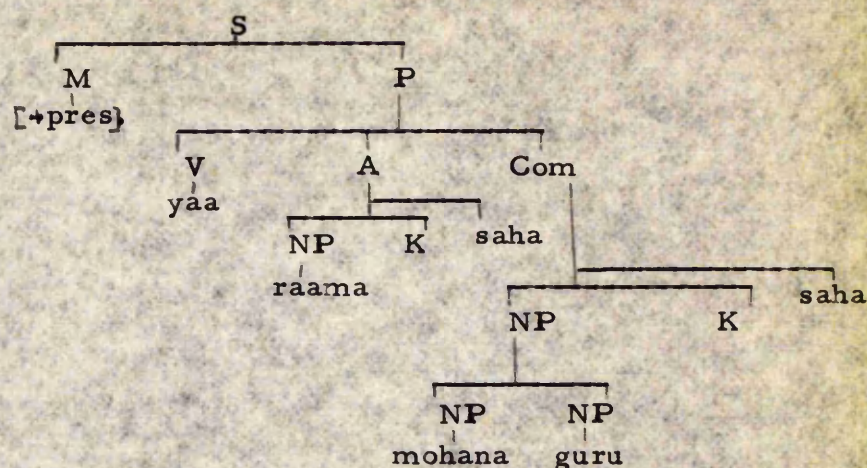
(a)



(b)

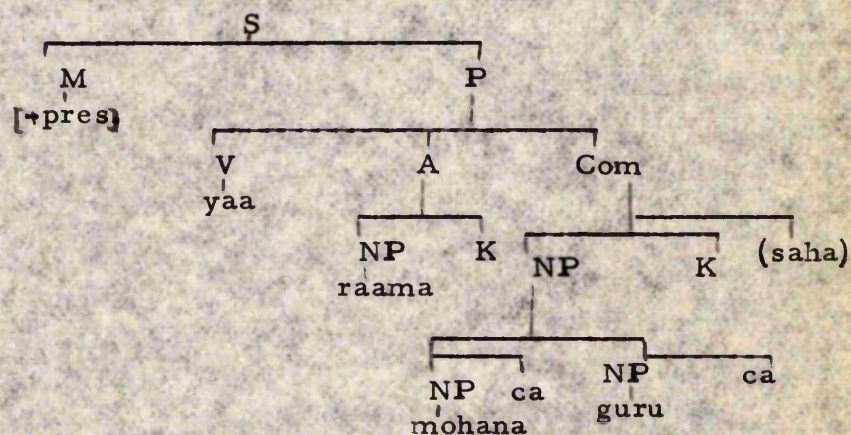


There appears to be no a priori reason to accept the one or reject the other. If the configuration (a) is adopted and the Com-promotion rule selects Com, for promotion and it is desired that Com₂ remains dominated by the case-category X (as in the configuration (c)) then there is no means of getting from (a) to (c).

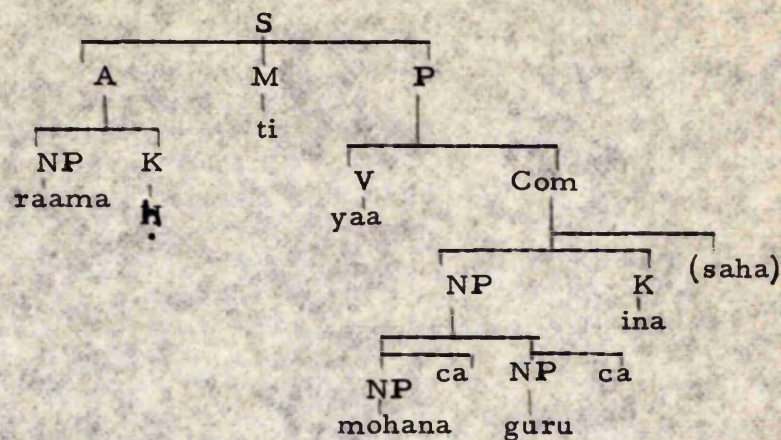
Figure XL

The 'ca'-attachment rule attaches 'ca' under Com and the 'saha'-deletion rule deletes 'saha' under A obligatorily and under Com optionally.

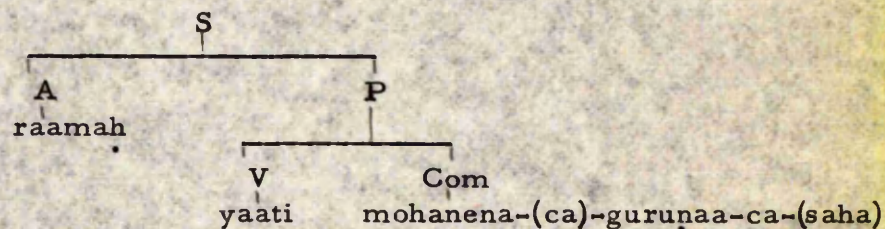
The result is as represented in figure XLI (omitting irrelevant details).

Figure XLI

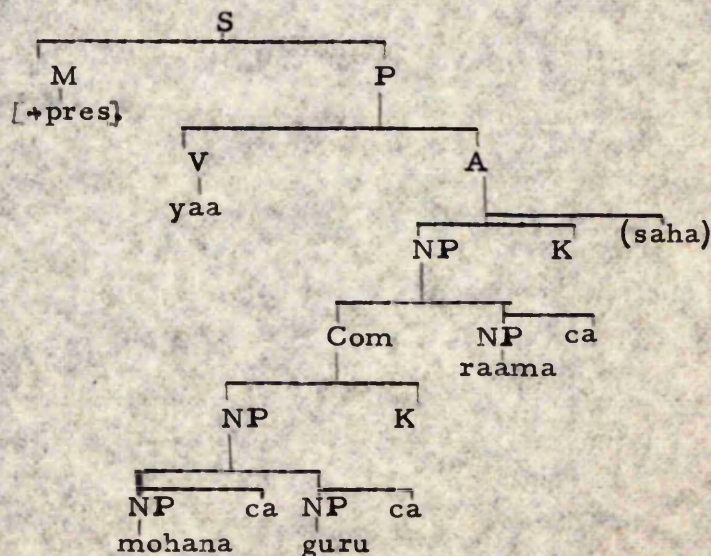
The Subjectivalisation-rule selects A for agreement with the V and the Affix-substitution-rule replaces features with affixes. The result (omitting irrelevant details) is as represented in figure XLII.

Figure XLII

The 'ca'-deletion rule applies and the final form is as represented in figure XLIII from which sentence 67 is realised.

Figure XLIII

Alternatively, at the stage of figure XXXIX, the Com-promotion rule does not apply. The 'ca'-attachment rule and the 'saha'-deletion rule apply and the result is as represented in figure XLIV.

Figure XLIV

appears to be quite logical, once it is accepted that sentences 67, 68 are parallels.

One may argue that it is possible to derive sentences 71, 72 (leaving out 69, 70, 73) from the configuration as given in figure XXXIX, if it is accepted that either of the NP's dominated by Com can be promoted.²⁸ The Com-promotion rule which applies optionally may promote Com (with all the NP's under its domain) or Com with either of the NP's under its domain.

The amended Com-promotion rule applies and the result is alternatively, as represented in figures XLVII, XLVIII (from figure XXXIX).

Figure XLVII

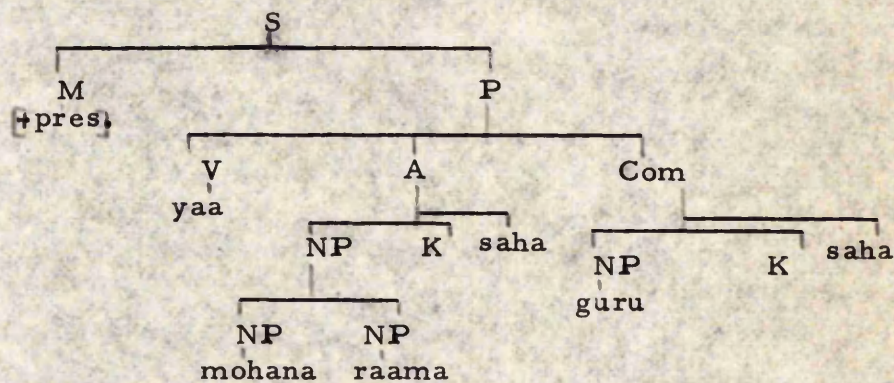
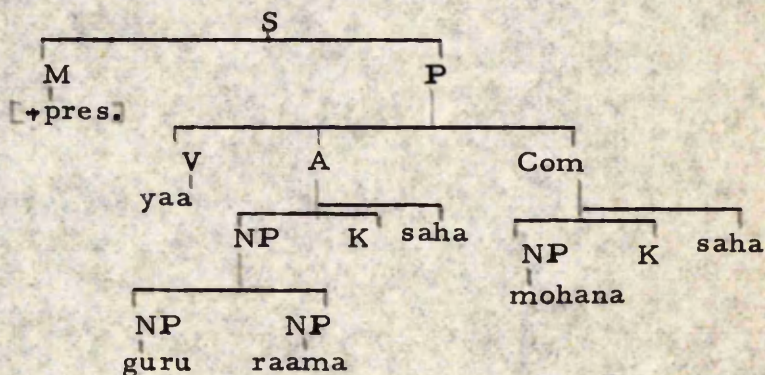


Figure XLVIII



28. This suggestion appears to contravene the Coordinate Structure Constraint (Ross, J.R., (1967), pp.158-162). But, as the constraints on variables in Sanskrit syntax have not been taken into account in this study, this problem is ignored.

The 'ca'-attachment rule, the 'saha'-deletion rule, the subjectivalisation rule, the affix-substitution rule, and the 'ca'-deletion rule apply (as in the case of sentences 67, 68, 68') and the result is as represented in figures XLIX, L from figures XLVII, XLVIII respectively (omitting intervening details)

Figure XLIX

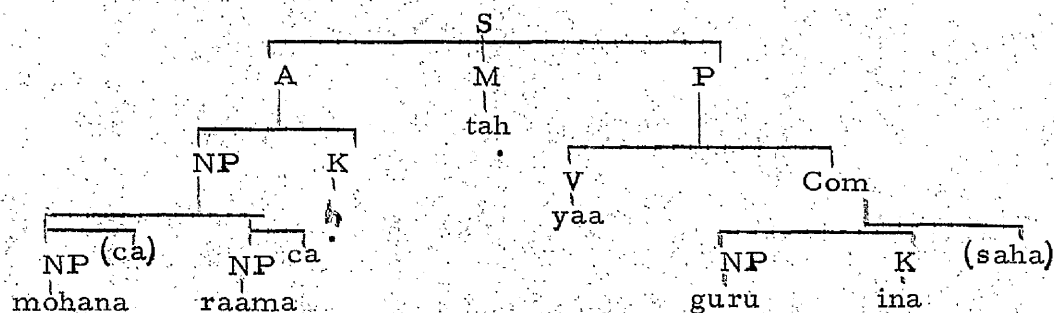
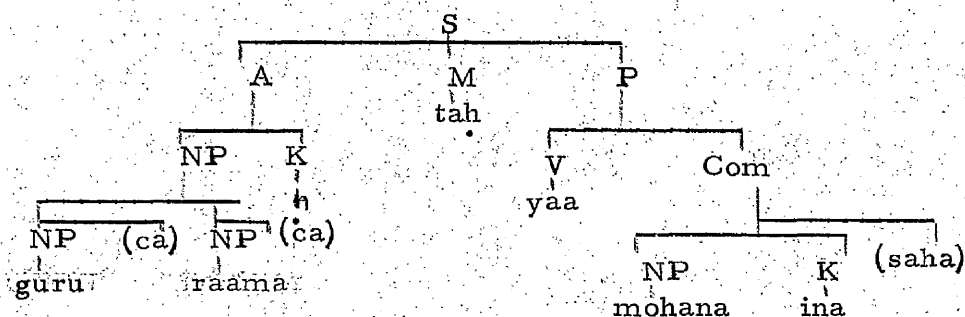


Figure L



The final forms are as in figures LI and LII (from figures XLIX, L respectively), from which we obtain sentences 71 and 72.

Figure LI

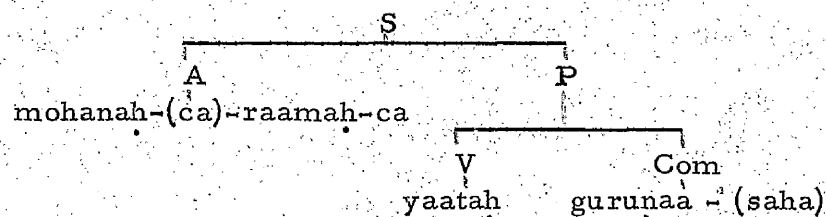
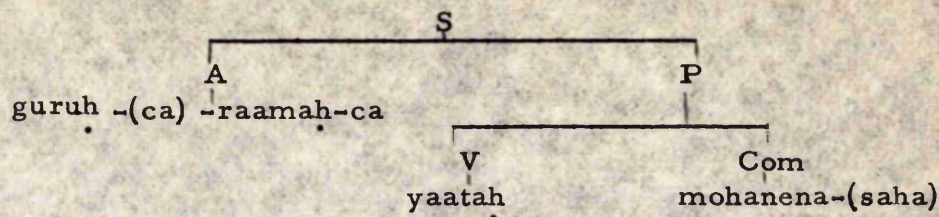


Figure LII

Thus, sentences 67, 68, 68', 71, 72 are derived from the same underlying structure (figure XXXIX). But, there still appears to be no way to derive sentences 69, 70, 73 from the same underlying structure unless it is accepted again (recall V.6.4) that the node Com can be substituted for A and vice-versa. In fact, the problem is the same as indicated earlier in relation to the derivation of sentence 66 above (V.6.4). It is proposed to leave this problem again (to be taken up in V.7.1) and discuss another set of sentences.

V.6.6. In this section sentences 74-82 are considered, so that we may see if the rules listed earlier (V.6.3) need change and if there arises any problem in deriving these sentences. All these sentences presuppose [+ joint] NP's. The verb 'yudhyati', in addition, implies reciprocity. The verb 'samvadati' does not necessarily imply reciprocity. The verb 'mis'rayati' implies reciprocity between the NP's dominated by O in addition to an A.

The derivation of sentences 74-82', may be assumed to have stages similar to those represented in figures XXX-XXXVIII, unless given below otherwise.

74. guruh - chaatreṇa - saha - yudhyati
 A nom Com i
 teacher - with student - with - fights
 (the teacher fights with the student)

75. chaatraḥ - guruṇā - saha - yudhyati
 A nom Com i
 student - with teacher - with - fights
 (the student fights with the teacher)
76. chaatraḥ - ca - guruḥ - ca - mithaḥ²⁹ - yudhyataḥ
 A nom A nom
 student - and - teacher - and - with each other - fight
 (the student and the teacher fight with each other)
- 76'. chaatraḥ - ca - guruḥ - ca - yudhyataḥ
 A A
 student - and - teacher - and - fight
 (the student and the teacher fight)
77. chaatraḥ - guruṇā - (saha) - samvadati
 A nom Com i
 student - with teacher - with - agrees
 (the student agrees with the teacher)
78. guruḥ - chaatreṇa - (saha) - samvadati
 A nom Com i
 teacher - with student - with - agrees
 (the teacher agrees with the student)
79. guruḥ - ca - chaatraḥ - ca - mithaḥ - samvadataḥ
 A nom A nom
 teacher - and - student - and - with each other - agrees
 (the teacher and the student agree with each other)
- 79'. guruḥ - ca - chaatraḥ - ca - samvadataḥ
 A nom A nom
 teacher - and - student - and - agree
 (the teacher and the student agree)
80. gopaḥ - dugdham - jalena - (saha) - miśrayati
 A nom O acc Com i
 milkman - milk - with water - with - mixes
 (the milkman mixes milk with water)

29. 'mithaḥ' is a cover term for (i) 'parasparam' (ii) 'anyonyam' (iii) 'mithaḥ', all meaning reciprocity.

Thus the problem mentioned twice earlier, lingers on (see section V.6.4). The problem is still left unsolved together with another problem which relates to the parallelism between 74, 75, 76/77, 78, 79/80, 81, 82 till V.7.1. Sentences 80, 81, 82 will be described through their derivation. There are two reasons: (i) the Com is dominated by O, unlike the other sentences, (ii) secondly, 'mithah' occurs in 82, 82' (as in 76, 76', 79-79' also) and as such the rules may require amendment. Sentences 74, 76, 76' and 77, 79, 79' have the underlying structures as represented in figures LIII and LIV respectively.

Figure LIII

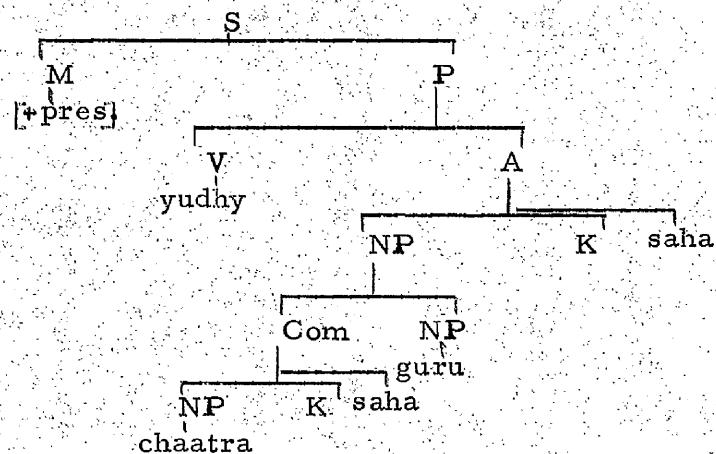
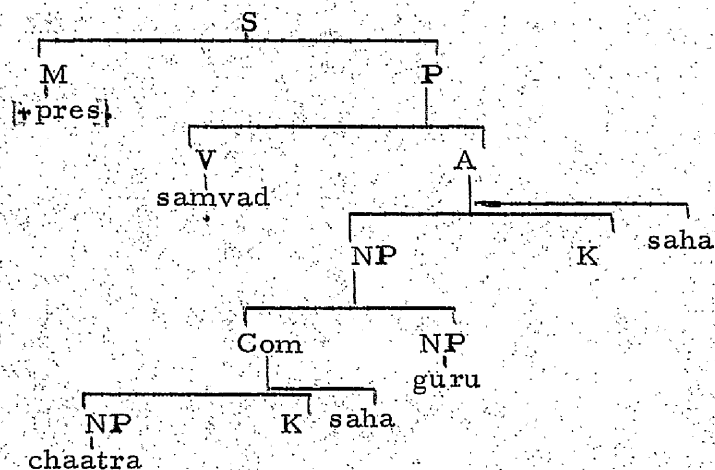


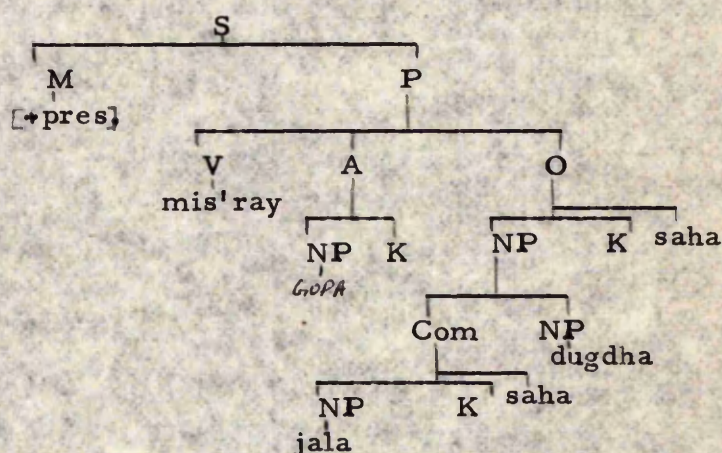
Figure LIV



Recall rules (V.6.3). Now, there appears the need to have a 'mithah' -substitution rule substituting 'saha' with 'mithah' (this rule operates after and in relation to rule 3(i) (V.6.3)), provided the sentence presupposes [+ joint] NP's; so that sentences 76, 79 may be derived.³⁰ As this 'mithah' - substitution will be needed in sentence 82 as well, let us first consider the derivation of sentences 80, 82, 82'.

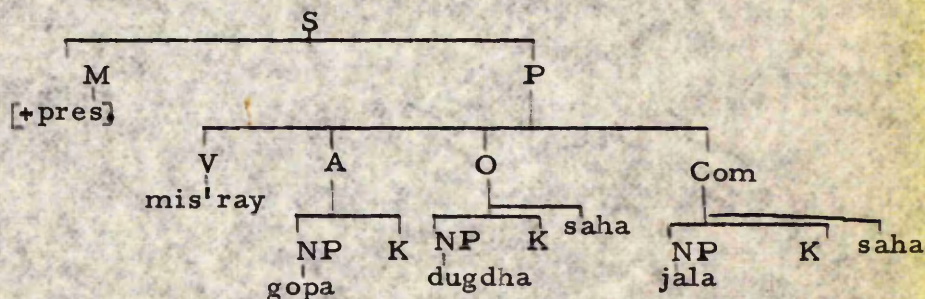
Sentences 80, 82, 82' have the underlying structure as in figure LV.

Figure LV



The Com-promotion rule applies and promotes Com. The result is as in figure LVI.

Figure LVI



The 'ca'-attachment rule cannot apply as there is one occurrence of NP

30. A sentence like 'gopah - jalam - dugdham + ca l saha - mis'rayati' (milkman - water - milk - and - with - mixes) appears doubtful. If this sentence is allowed, the 'mithah' -substitution rule will operate optionally.

under O/Com. The 'saha'-deletion rule, the Subjectivalisation rule and the Affix-substitution rule apply and the result is as represented in figure LVII

The final form is in figure LVIII from which we obtain sentence 80.

Figure LVII

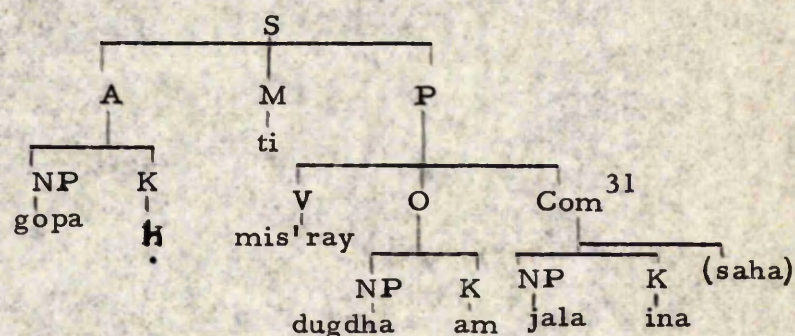
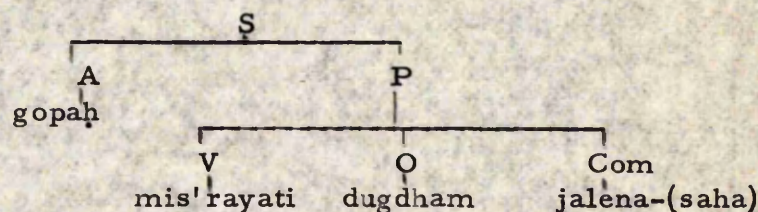


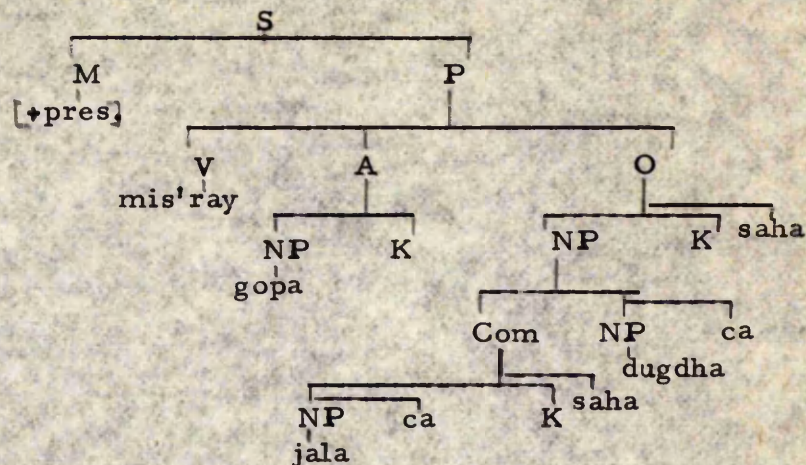
Figure LVIII



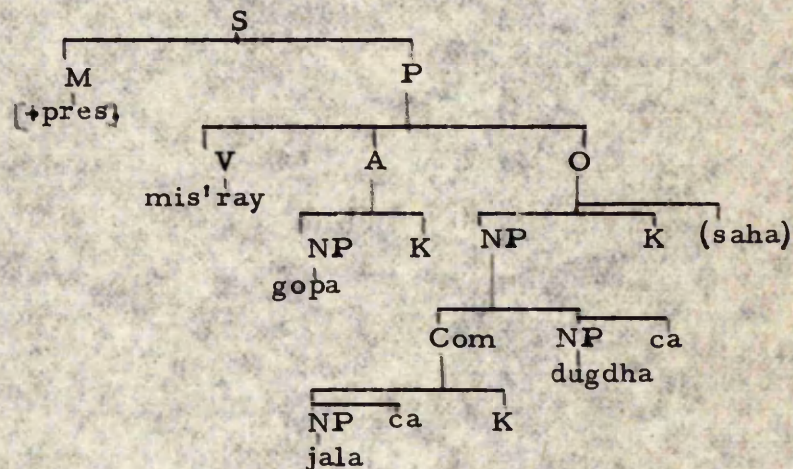
Alternatively, at the stage of figure LV, the Com-promotion rule does not apply. As a result Com remains dominated by O.

Now, the 'ca'-attachment rule applies and attaches 'ca' after each NP under O. The result is as in figure LIX.

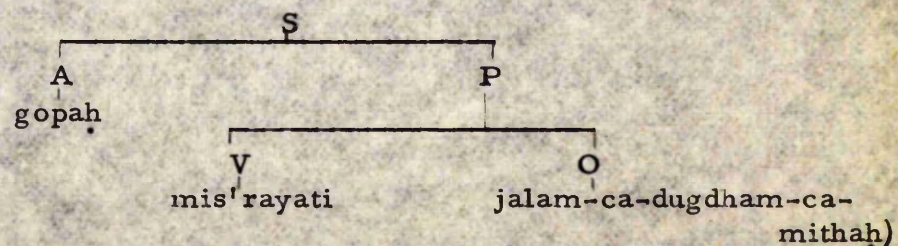
-
31. It may be noted that the K-element under O is realised as '-am' and under Com it is 'ina'. There is a morphophonemic rule to the effect that the K under Com (after its promotion) is 'ina' i.e. i-inflexion. The rule is relevant only when Com is not dominated by A/D in the underlying structure.

Figure LIX

The 'saha'deletion rule applies and the result is as represented in figure LX.

Figure LX

Now, the V in figure LX is I + joint I and as such a 'mithah'-substitution rule applies and substitutes 'saha' with 'mithah'. The Subjectivisation-rule selects A for agreement with the V and the Affix-substitution rule replaces features with affixes. The result (omitting irrelevant details) is as represented in figure LXI.

Figure LXI

Thus we obtain sentences 82, 82' from figure LXI.

V.6.7. Now, the rules (V.6.3) are recalled and in the light of the above derivations are restated (the rule which remains as in V.6.3. is mentioned by the serial number only).

1. as in V.6.3.
2. as in V.6.3.
3. as in V.6.3.
4. A 'mithah'-substitution rule which operates (only when rule 1 above has not applied) and in relation to 3(i) above, substitutes 'saha' with 'mithah' in the case-frames of verbs which are [+ joint]
5. rule 4 of V.6.3.
6. rule 5 of V.6.3.
7. rule 6 of V.6.3.

The above derivations have been developed on the basis of the rather sketchy treatment of the Comitative by Fillmore, or more correctly speaking on the basis of his 'suggestion.'³²

V.7.1. Now, consider the problems which have been left unsolved or have been assumed to be non-existent. The first relates to the status of Com in case it is not promoted (as in figures XXXVI, XXXVII, XLIV, XLV, LIX, LX). There appears to be no justification to retain the node Com inside A/O, as in that case it does not behave as a Com at all. Even if it is argued that this is a notational matter, this problem suggests the need for at least, an alternative notation.

The second and third problems appear crucial. It was mentioned earlier that sentence 66 cannot be derived from the underlying structure (figure XXX) from which sentences 64, 65 are derived

32. Fillmore, C.J., (1968a), pp.81-83.

(section V.6.4), and sentences 69, 70, 73 cannot be derived from the underlying structure (figure XXXIX) from which sentences 67, 68, 71, 72 (section V.6.5) are derived; unless it is accepted that the node Com can be substituted with the case-category dominating it and vice-versa (it has been possible to derive sentences 71, 72 from the same underlying structure (figure XXXIX) only when the Com-promotion rule has been allowed to promote either or both of the NP's dominated by it (figures XLVII, XLVIII). Similar problem arises with the derivation of sentences 75, 78, 81 from the underlying structures (figures LIII, LIV, LV respectively) from which sentences 74, 76/77, 79/80, 82 have been derived respectively. In fact, the complexity of the problem would increase the greater the degree of recursion under Com. However, it is apparent that sentences 64, 65, 66/67, 68, 69, 70, 71, 72, 73/74, 75, 76/77, 78, 79/80, 81, 82 are related, and any proposed process must bring out this relatedness, otherwise it needs modification or rejection.

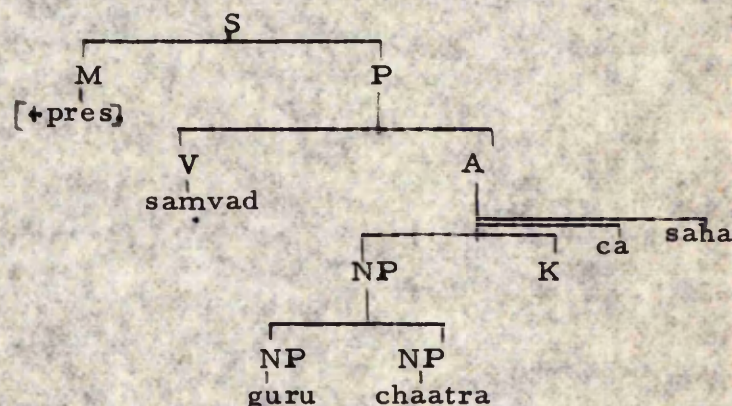
The third problem is regarding the sentences as 'parallels'.³³ Perhaps, there may not be much objection in accepting sentences 64, 65, 66/67-73/80-82 as parallels. But, there is some meaning-distinction among sentences 77-79: a student may agree with his teacher, but it does not imply that the teacher also agrees with the student; or the teacher may agree with the views of the student without the student agreeing with the teacher's views; or the teacher and the student may agree with each other. How can one account for this

33. Fillmore, C.J., (1968a), p. 81.

distinction? A similar problem arises with sentences 77-79. Some have maintained that these are not parallels and Lakoff & Peters's position on symmetric predicates is not correct in such cases.³⁴ Before finding a way out of this problem, a somewhat different notation for the derivation of sentences discussed (in V.5.3 - V.6.6) above is proposed, which will involve simpler rules (recall rules: V.6.3, V.6.7) and bring out the relatedness between these sentences more neatly. For this purpose sentences 77-79 are described through their derivation.

Sentences 77-79 have the underlying structure as in figure LXII. One revision in this configuration is the absence of the node Com and the presence of 'ca' and 'saha' (cf. V.6.2, figure XXX).

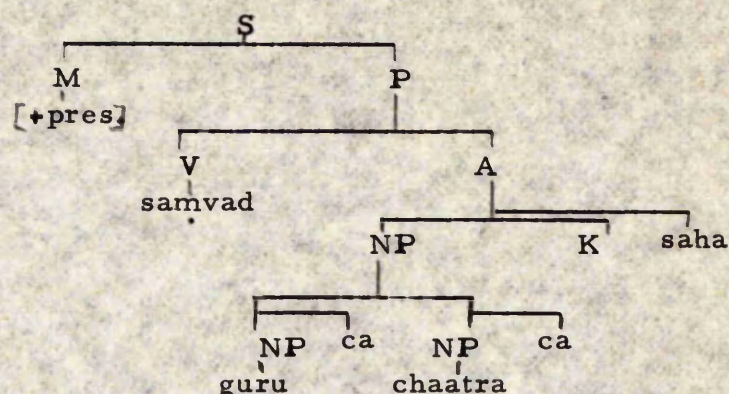
Figure LXII



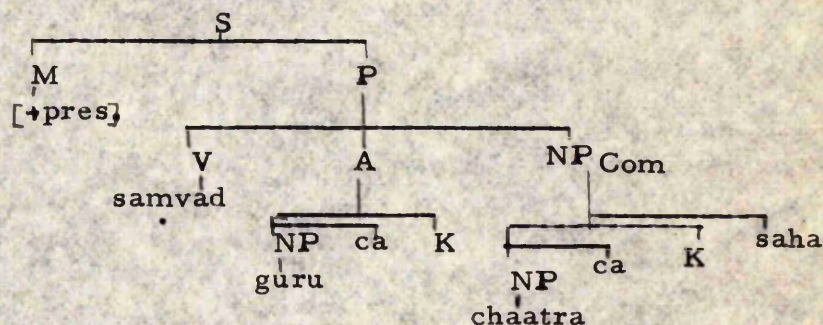
In the above configuration the NP is subject to a rule like $NP \rightarrow NP^n$, $n \geq 2$.

A 'ca'-spreading rule applies and attaches 'ca' after each NP under A. The result is as represented in figure LXIII.

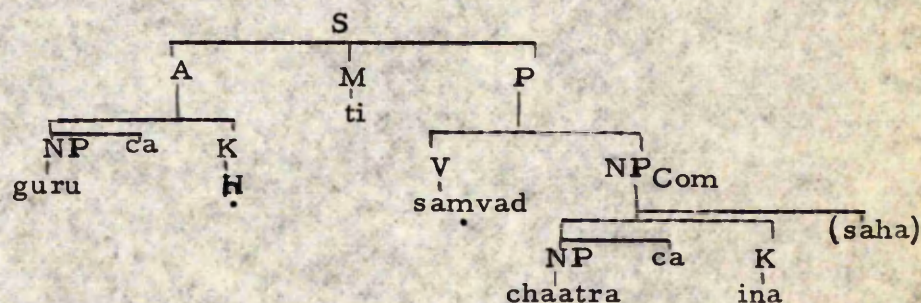
34. Stockwell, R.P. et.al. (1968) pp.325-326: it is mentioned that D. T. Langendoen also holds this view.

Figure LXIII

Now an NP-promotion rule applies optionally and promotes the NP 'chaatra' and attaches the feature Com to it. A 'saha'-movement rule adjoins 'saha' to NP_{Com}. The result is as represented in figure LXIV.

Figure LXIV

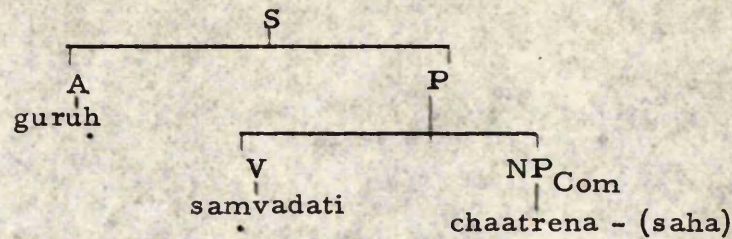
A 'saha'-deletion rule applies optionally. The subjectivisation-rule selects A and the affix-substitution rule replaces the features with affixes. The result (omitting irrelevant details) is as represented in figure LXV.

Figure LXV

A ca-deletion rule (cf. rule 6: V. 6.3) deletes obligatorily all occurrences of 'ca' under A and NP_{Com} (however, if there is more than one occurrence of 'ca' under a node, all except the rightmost are optionally deleted).

The final result is as represented in figure LXVI.

Figure LXVI

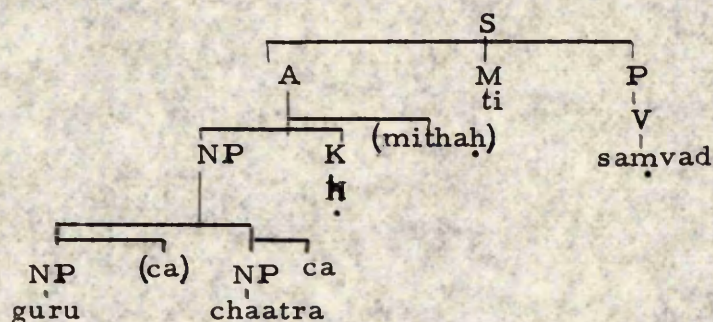


Thus sentence 78 is obtained from figure LXVI.

Now, at the stage of figure LXIII, the NP-promotion rule may select the NP 'guru' for promotion and through the derivation as outlined above (figures LXII - LXVI), we obtain sentence 77 above.

Alternatively, at the stage of figure LXIII, the NP-promotion rule does not apply. The saha-deletion rule and the 'mithah'-substitution rule apply. The subjectivalisation-rule selects A for agreement with the V. The Affix-substitution rule and the ca-deletion rule apply and the result (omitting irrelevant details) is as represented in figure LXVII.

Figure LXVII



The final form is as represented in figure LXVIII from which we obtain sentences 79, 79'.

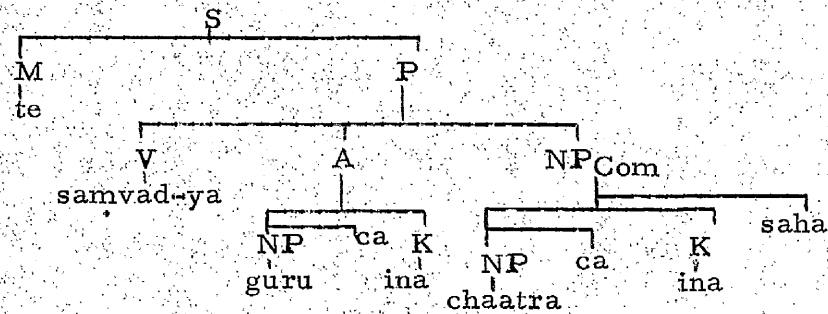
V.7.2. Now, it is appropriate to restate the rules (V.6.3; V.6.7) in the light of the above derivations. It may be noted that the above derivations (LXII - LXIX) involve simpler rules.

1. A 'ca' - spreading rule applies and attaches 'ca' after each NP under a case-category.
2. An optional NP-promotion rule promotes one or more (applying recursively) NP(s) with the feature Com [i.e. NP_{Com}]. It may be noted that the number of NP's being promoted should be at least one less than the total number of the NP's dominated by the case-category.
3. A 'saha'-movement rule adjoins 'saha' to the NP_{Com} .
4. A 'saha'-deletion rule operates optionally.
5. A 'mithah'-substitution rule substitutes 'saha' with 'mithah' if the verb is [+ joint]. This rule operates only when rule 2 above has not applied.
6. The Subjectivalisation-rule applies optionally.
7. The Affix-substitution rule replaces the features with affixes.
8. A 'ca'-deletion rule applies as follows:
 - (i) it deletes a single occurrence of 'ca' under any case-category or NP_{Com} obligatorily.
 - (ii) if there is more than one occurrence of 'ca' under a node, all except the rightmost are optionally deleted.

V.7.3. Now, if the above analysis is accepted, problems one and two (V.7.1) disappear as there is no Com node under a case-category in the underlying structure (figure LXIII), to be dispensed with and secondly, as shown earlier (figures LXIII - LXX), all related sentences can be derived from the same underlying structure.

The third problem relates to the status of the interrelated sentences as 'parallels'. If it be accepted that the promotion of one or more of the NP's (which are instances of phrasal conjunction), is related to the meaning-distinction between sentences 77, 78, 79 and elsewhere, this problem need not be posed. Sentences 77, 78, 79 would be considered related and not as parallels. This leads to the position that there need not be a case-category like Comitative in the underlying structure. This process of NP-promotion will have to precede the application of the subjectivalisation-rule. Because, if the promotion does not take place first, all the NP's dominated by A/D/R/O/F will be subject to the operation of the subjectivalisation-rule or process of passivisation.

There are two points about the constituent NP_{Com} (which is the result of the operation of the NP-promotion rule). In the first place, it is related to the phrasal conjunction limited to the case-categories A/D/R/O/F. Secondly, this NP_{Com} differs from A/D/R/O/F in its syntactic behaviour. It has been mentioned earlier that the subjectivalisation rule may select A/D optionally and, if R/O/F occurs in the case-frame and A/D is not subjectivalised, the process of passivisation operates and selects R/O/F for subjectivalisation. But, in no case can the NP_{Com} be selected for subjectivalisation. Thus, if the subjectivalisation-rule does not select A for subjectivalisation (at the stage of figure LXV), the process of passivisation without subjectivalisation operates and the result is the configuration represented in figure LXX (omitting irrelevant details), from which, ultimately, a sentence like 78' is derived.

Figure LXX

- 78ⁱ. gurunaa - chaatrena³⁵ - (saha) - samudyate
 A i NP_{Com} i
 by teacher - with student - (with) - is agreed
 ((it) is agreed by the teacher with the student)

However, despite this syntactic behaviour of the NP_{Com} distinguishing it from A/D/R/O/F, it cannot be specified as a specific case-category in the underlying-structure, as discussed in the foregoing pages.

35. The K-element under NP_{Com} is always realised as the instrumental inflexion.

CHAPTER VI

VI. 1. In this chapter it is proposed to deal with the nature of the lexicon in FCG (section VI.1.1), and specify a set of lexical entries for verbs (VI.1.2), and a set of rules related to both the base and transformational components (VI.1.3).

VI.1.1. As mentioned earlier (I.1.2.6. f.n.48), FCG is explicated within the conceptual framework of TG grammar. However, the assumptions (I.1.2.2. - I.1.2.4) of FCG lead to some significant modifications in the lexicon.

VI.1.1.1. The base-component of a TG model grammar is considered to consist of a categorial component with unordered context-free rewriting rules called P(hrase) S(tructure) rules, and a lexicon containing a set of unordered lexical entries. Grammatical properties which are not relevant for categorial component (i.e. P.S.) rules and those which are highly idiosyncratic could be assigned to the lexicon.

As Chomsky favours selection of V's in terms of the prior selection of nouns and considers subject-object as relational terms in the base-component, the lexicon assumes a complex form. Two sets of rules are proposed: (i) strict sub-categorisation rules analyse a CS(V) in terms of contextual (categorial) features and (ii) selectional rules (or selectional restrictions/restrictions of cooccurrence) analyse a CS in terms of syntactic features of the frame in which it (CS) occurs.¹

1. Chomsky, N., (1965), pp. 64-74.

FCG favours the prior selection of V's followed by the selection of other items in terms of V's (I.1.2.4). There is more than one reason to commend this position: (i) verbs 'in a very real sense are selectionally dominant'² (ii) prior and random selection of nouns may lead to a large number of strings which are to be discarded later on, (iii) prior selection of verbs has 'side-effects.'³

This position of FCG, along with the consideration that subjects and objects do not play a role in deep structure, leads to a change in the specification of the lexicon. In the lexicon, selectional restrictions, unlike strict subcategorisation rules, are not concerned with the domain of one constituent. Selectional restrictions range over a subject noun and a verb as well as an object noun and a verb.⁴ Accepting that subject and object are surface-phenomena⁵, i.e. they do not originate in the base-component, there appears to be no need to retain this distinction between subcategorisation rules and selectional restrictions.

2. Stockwell, R.P., et al. (1968), p.935.

;

3. Stockwell, R.P., et al. (1968), p.934: 'side effects are effects on the other nodes in a tree after an item has been inserted.' If verbs are selected first, the case-frames for the verbs indicate the possible case-category nodes in the tree.

4. Robinson, J.J., (1969), p.71: "the examples of selectional restrictions exhibit only those imposed by the inherent features of nouns on verbs with which they occur in subject or object-relation."

5. See I.1.2.6. (f.n.54).

VI.1.1.2. FCG suggests that case-relationships may be specified in the lexicon in terms of frame-features. These frame-features are spelled out in a case-frame which contains the cases with which a verb cooccurs to form a P(roposition). Thus a verb like 'hanti' (kill) has a case-frame like I,

I. hanti : [+ V] : [A, (I), R —]

indicating, thereby, that the verb cooccurs with Agentive, Receptive and an Instrumental which may or may not be present in a structure like

1. dustah - (churikayaa) - pas'um - hanti
 A I
 wicked - with knife - animal - kills

(the wicked man kills the animal with a knife)

In the above sentence 1, I is an optional case-category.

VI.1.1.3. Each lexical entry in a case-frame has associated with it a CS which indicates category-features, contextual features and inherent features.

A lexical entry like 'hanti' (kill) has a category feature like [+ V]. Each CS indicates only one category feature which is specified positively.

The case-frame like I given above, shows contextual features i.e. the array of cases with which a lexical entry like 'hanti' can cooccur. FCG proposes that the optional occurrence of an item in the case-frame may be indicated by parentheses, as in the case-frame I given above.

Again, FCG suggests linked-parentheses to indicate that one of the linked items is obligatory. Thus, for sentences like 2 and 3, the case-frame would be shown like II.

- II. $\text{pacati} : [+ V]$
 (cooks) $[(A, F [L]) \text{ --- }]$
2. $\text{suudah} - \text{sthaalyaam} - \text{bhaktam} - \text{pacati}$
 A L F
 cook - in pot, - rice - cooks
 (the cook cooks rice in a pot)
3. $\text{sthaalii} - \text{pacati}$
 L
 pot - cooks

FCG proposes to show inherent features of lexical entries by a schema like

$$N \longrightarrow [+ \text{animate}]^{A, D} / [X \text{ --- } Y]$$

It may be noted that the nouns like 'suudah' (cook), 'dustah' (wicked) are not inherently A (or any other case-category for that matter). The only inherent feature that is relevant to them is $[+ \text{animate}]$. The schema is syntactic and says that a construction would be unacceptable if the feature $[- \text{animate}]$ is specified for an item which is positively specified as A/D.

VI.1.2. In this section, a list of verbs with their case-frames, is given. The verbs are specified in their singular third person forms. Polysemous forms are treated with only one reading.

1. $\text{arhati} : [+ V]$
 (deserves) : $[D, O, (SO) \text{ --- }]$
2. $\text{asti} : [+ V]$
 (is) Es $\left\{ \begin{array}{l} (T) \\ (L) \end{array} \right\} \left(\begin{array}{l} GO, (SO) \\ Ext, (GO), (SO) \end{array} \right)$
3. $\text{icchati} : [+ V]$
 (desires) $[D, O, \text{ --- }]$
4. $\text{kathayati} : [+ V]$
 (says) $[A, (R), O \text{ --- }]$

5. karoti : I + V I
(does) I A, O, — I
6. kriidati : I + V I
(plays) I A, (O)(I), — I
7. krudhyati : I + V I
(gets angry) I D, R — I
8. krs'yati : I + V I
(to become feeble/slim) I D, (I) — I
9. ksipati : I + V I
(throws) I A, {O
R} , GO (Pa), (I), (SO) — I
10. khanati : I + V I
(digs) I A, O, (I), (L) — I
11. khaadati : I + V I
(eats) I A, (O), (I), (L) — I
12. garjati : I + V I
(roars) I A, (I), (L) — I
13. gaahate : I + V I
(dives) I A, L — I
14. guuhati : I + V I
(conceals) I A, O, (I), (L), (SO) — I
15. gaayati : I + V I
(sings) I A, O — I
16. grasate : I + V I
(swallows) I A, O, (L) — I
17. grhnaati : I + V I
(takes) I A, O, SO, (I), (L) — I
18. jighrati : I + V I
(smells) I A, O, (I) — I
19. calati : I + V I
(moves) I {A
O} , I, (L) — I
20. carati : I + V I
(grazes) I A, O, (L) — I
21. cinoti : I + V I
(gathers) I A, O, (SO), (I), (L) — I
22. corayati : I + V I
(steals) I A, O, (L), — I

23. cumbati : I + V I
(kisses) I A, L — I
24. cuurnayati : I + V I
(crushes, makes a powder) I A, O, (I), (L) — I
25. cestate : I + V I
(tries) I A, S — I⁶
26. chinatti : I + V I
(cuts) I (I) A, O, (L) — I
27. jayati : I + V I
(wins) I A, (SO), (O) — I
28. jiivati : I + V I
(is alive) I D, (Ext), (L) — I
29. jaanaati : I + V I
(knows) I D, O — I
30. jvalati : I + V I
(burns) I O, I — I
31. tanoti : I + V I
(stretches) I A, O, L, (I), (Ext), (SO), (GD) — I
32. tarjati : I + V I
(threatens) I A, R — I
33. taadayati : I + V I
(beats) I A, R, (I), (L) — I
34. trpyati : I + V I
(becomes satisfied) I D, I — I
35. tarati : I + V I
(swims / crosses) I A, L — I
36. tvarate : I + V I
(hurries) I D, S — I
37. dams'ati : I + V I
(bites) I A, R, (I) — I

6. No theoretical position is implied by this abbreviatory device. As mentioned earlier (I. 1. 3. 6), sentences are embedded under a case (cf. P.S. rules VI. 1. 3. 1.). The occurrence of S in the case-frames of the underlined verbs, indicates that these verbs do not have simple underlying structures.

54. pibati : [+ V]
(drinks) [A, O, I —]
55. piidayati : [+ V]
(hurts) I(A)(I), R —]
56. puspyati : [+ V]
(blooms) [O —]
57. puujayati : [+ V]
(worships) [A, (O), (I) —]
58. puurayati : [+ V]
(fills) I (A), O, L —]
59. prcchati : [+ V]
(asks) [A, R, O —]
60. plavate : [+ V]
(floats) [A, L, (I) —]
[O, L]
61. badhnaati : [+ V]
(binds) [A, { R, (L), (I) —]
[O]
62. bhanakti : [+ V]
(breaks) [A, O, (I) —]
[O]
63. bhaati : [+ V]
(shines) [O, (I) —]
64. bhikṣate : [+ V]
(begs) [A, O, (SO) —]
65. bhinatti : [+ V]
(cuts) [A, O, (I) —]
[I]
[O]
66. bibheti : [+ V]
(fears) I D, { R } —]
[O]
67. bhrjjati : [+ V]
(fries) [A, (O)(F), (L), (I) —]
68. bhramati : [+ V]
(wanders, walks) [A, (L) —]
69. manyate : [+ V]
(considers) [A, S —]

70. mantrayati : I + V I
(advises) I A, R — I
71. mathnaati : I + V I
(churns) I A, (F)(O), (I) — I
72. maafi : I + V I
(measures) I A, $\begin{Bmatrix} O \\ R \end{Bmatrix}$, (I), (L) — I
73. milati : I + V I
(comes together, joins) I A, R — I
74. millati : I + V I
(closes (as the eyes)) I O — I
75. mriyate : I + V I
(dies) I D, (I) — I
76. yaati : I + V I
(goes) I A, (SO), (GO), (Ext), (Pa) — I
77. (aa)rabhate : I + V I
(begins) I A, S — I
78. rocate : I + V I
(pleases) I O, R — I
79. runaddhi : I + V I
(obstructs) I A, R, (L), (I) — I
80. rohati : I + V I
(grows) I O, (I), (L) — I
81. likhati : I + V I
(writes) I A, F, (I), (GO) — I
82. lunaati : I + V I
(cuts) I $\begin{Bmatrix} A, (I), O \\ I \\ O \end{Bmatrix}$ — I
83. vapati : I + V I
(shaves) I A, (I), O — I
84. vaati : I + V I
(blows) I O, (L) — I
85. vis'ati : I + V I
(enters) I A, GO — I
86. vartate : I + V I
(is, exists, is present) I D, L — I

87. $\underline{s'aknoti} : I \rightarrow V I$
(can, is able) $I A, S \rightarrow I$
88. $\underline{s'aNkate} : I \rightarrow V I$
(doubts) $I A, S \rightarrow I$
89. $\underline{s'iksate} : I \rightarrow V I$
(learns) $I A, (SO), O \rightarrow I$
90. $\underline{s'ete} : I \rightarrow V I$
(sleeps) $I A, (L) \rightarrow I$
91. $\underline{s'rnoti} : I \rightarrow V I$
(hears) $I D, \begin{Bmatrix} R \\ O \end{Bmatrix} \rightarrow I$
92. $\underline{sin'cati} : I \rightarrow V I$
(sprinkles) $I A, O, (L) \rightarrow I$
93. $\underline{snaati} : I \rightarrow V I$
(bathes) $I A, (I), (L) \rightarrow I$
94. $\underline{spr's'ati} : I \rightarrow V I$
(touches) $I A, \begin{Bmatrix} O \\ R \end{Bmatrix}, (I) \rightarrow I$
95. $\underline{hanti} : I \rightarrow V I$
(kills) $I A, R, (I) \rightarrow I$
96. $\underline{hasati} : I \rightarrow V I$
(laughs) $I A \rightarrow I$
97. $\underline{hvayati} : I \rightarrow V I$
(calls) $I A, R \rightarrow I$

VI.1.3. In this section a list of rules is given. Section VI.1.3.1. contains the P(hrase) S(tructure) rules and section VI.1.3.2. specifies a selection of more important t(ransformational) rules.

VI.1.3.1. P.S. rules:

Given # S #

1. $S \rightarrow S^n \text{Ca} ; n \geq 2$
2. $S \rightarrow M P$
3. $P \rightarrow V C_1 \dots C_n$

$$C_i = A/D/R/O/F/I/L/SO/GO/Ext/Pa/Es/T$$

4. $C \rightarrow \left\{ \begin{array}{l} NP + K (+ PP) \\ S^5 \end{array} \right\}$
5. $NP \rightarrow NP^n \text{ ca saha ; } n \geq 2$
6. $NP \rightarrow N \left(\begin{array}{l} S \\ D \\ O \end{array} \right)$
7. $N \rightarrow CS$
8. $V \rightarrow CS$
9. $M \rightarrow (\text{Tense})(\text{aspect})$
10. $\text{Tense} \rightarrow \left\{ \begin{array}{l} \text{past} \\ \text{present} \\ \text{future} \\ \text{modal} \end{array} \right\}$
11. $\text{Aspect} \rightarrow \left\{ \begin{array}{l} \text{perfective} \\ \text{progressive} \\ \text{modal} \end{array} \right\}$

VI.1.3.2. In this section some important T(ransformational) rules are specified.

T rules:

I. Conjunction - Reduction rule (optional)

$$\begin{array}{cccccccccccc} [& [& M & [& V & [& NP &] & X &] &] & [& M & [& V & [& NP &] & Y &] &] - CA] \\ S_0 & S_1 & P & C & C & P & S_1 & S_2 & P & C & C & P & S_2 & S_0 \end{array}$$

SD: 1 2 3 4 5 6 7 8 9

SC(a): 1 2+6 3+7 4+8 \emptyset \emptyset \emptyset \emptyset 9

conditions (i) 3, 7 are the same case-category (for this A, D are treated as the same case-category)

(ii) 1 and 5 show the same tense

-
5. Not all the cases may dominate S. However, the restrictions on embedding S are not considered as they are outside the scope of the present study.

SC(b) 1 + 5 2 + 6 3 + 7 4 + 8 \emptyset \emptyset \emptyset \emptyset 9

conditions: (i) as above

(ii) 1 and 5 do not show the same tense.

II. Identical Conjunct-collapsing rule (obligatory).

$[M \mid V \mid V \mid NP \mid NP \mid X] - CA$
S P C C P S

SD: 1 2 3 4 5 6 7

SC(a): 1 2 \emptyset 4 5 6 7 if 2 = 3

(b): 1 2 3 4 \emptyset 6 7 if 4 = 5

III. 'KRAMAS'AH' - attachment rule (optional)

$[M \mid V \mid V \mid NP \mid NP \mid X] - CA$
S P C C P S

SD: 1 2 3 4 5 6 7

SC(a): 1 2 3 4 5 6 kramas'ah 7

(b): 1 2 3 4 \emptyset 6 kramas'ah 7

'kramas'ah' is adjoined as daughter of P.

condition for (b): 4 = 5 and they indicate set indices

Rules I, II, III apply in the order given above.

IV. NP - promotion rule (optional)

$X \mid M \mid V \mid NP \mid CA \dots NP \mid CA \mid SAHA \mid Y \mid Z$
S P C C P S

SD: 1 2 3 4 5 6 7 8

SC: 1 2 3 4 \emptyset 6 5 7 8
[+Com]

5 is daughter-adjoined to P

V. 'SAHA'-movement rule (obligatory and must follow IV)

X I M I V I N P , C A S A H A I N P_{Com} Y I I Z
S P C C P S

SD: 1 2 3 4 5 6 7 8

SC: 1 2 3 4 \emptyset 6 5 7 8

56 is daughter-adjoined to NP_{Com}

VI. Conjunction-spreading rule

(a)

IMIV,VINP...NP|X|-CAI
S P C C P S

SD: 1 2 3 4 5 6 7

SC: 1 2+7 3+7 4+7 5+7 6 \emptyset

(b)

[M [V [NP ... NP] - CA X]]

S P C C P S

SD: 1 2 3 4 5 6

SC: 1 2 3+5 4+5 \emptyset 6

Rule VI may be ordered after III or V

VII Nominalisation-rule (optional)

[X [M [V Y]] Z]
 S S P P S S

SD: 1 2 3 4 5

SC: 1 2 3 4 5
 [→Nom]
 [→adj]

VIII M(odality)-deletion rule

[W [X M [V ~~dom~~ Y]] Z]
 S S P P S S

SD: 1 2 3 4 5 6

SC: 1 2 0 4 5 6

IX. 'SAHA'- deletion rule (optional)

$$X \mid Y \rightarrow SAHA \mid Z$$

SD: 1 2 3 4

SC: 1 2 \emptyset 4

X. 'MITHAH'- substitution rule

$$X \mid V \mid \underset{C}{NP} \dots NP \mid \underset{C}{SAHA} \mid Y$$

SD: 1 2 3 4 5 6

SC: 1 2 3 4 \emptyset mithah 6

'mithah' is daughter-adjoined to C

condition: V is I \rightarrow joint I

Rule X follows rule IX.

XI. Subjectivalisation-rule (optional)

$$X \mid M \mid V \mid C \mid Y \mid I \mid Z$$

$$\quad \quad S \quad P \quad \quad P S$$

SD: 1 2 3 4 5 6

SC: 1 4 2 3 \emptyset 5 6

conditions: 1. 4 = A/D/ \emptyset /Es

or 2. if 4 = O/F/I/L which dominates 'svayameva'
as well

then 5 \neq C

or 3. if 4 = \emptyset ; I and indicates a natural phenomenon

then 5 \neq A/D

XII. Copula-deletion rule (optional)

$$X \mid C \mid M \mid \text{Cop} \mid Y \mid I \mid Z$$

$$\quad \quad S \quad \quad P \quad \quad P S$$

SD: 1 2 3 4 5 6

SC: 1 2 3 \emptyset 5 6

Conditions: 1. M is I \rightarrow pres. I

2. if Y = V_{Nom}, it does not show the
stem-element 'at'

XIII. Passivisation-rule (optional)

X I M I V C Y I I Z
 S P P S

SD: 1 2 3 4 5 6

SC: (a) 1 4 2 3 \emptyset 5 6
 +yaaconditions: 1. 4 = R/F/O (and GO when V dominates a synonym of
 'yaa(ti))

2. 5 = A/D (or I indicating a natural phenomenon)

elsewhere : (b)

(b) 1 \emptyset 3+2 4 5 6
 +yaa

XIV. M(odality)-attachment rule

W I X M I V Y I I Z
 S P P S

SD: 1 2 3 4 5 6

SC: 1 2 \emptyset 4+3 5 6

(this rule follows Affix-substitution rule which is not given here)

XV. 'ca'-deletion rule

X I I NP + CA I I V NP + CA Y I I Z
 S C C P P S

SD: 1 2 3 4 5 6 7 8

SC: 1 2 \emptyset 4 5 \emptyset 7 8

the rule is optional if NP's are complex

CHAPTER VII

VII. This chapter sums up those points of interest in FCG which have arisen in the analysis of the foregoing chapters.

VII.1. As mentioned earlier (I.1.3.5, I.1.3.6), FCG holds that a case-system could be accepted as a linguistic universal. Unless, a large number of languages is investigated from this point of view, nothing in this connection can be attested conclusively. At the present stage of research there appears to be insufficient evidence for or against this position.

VII.2. According to FCG cases are syntactically justified semantic primitives.¹

The cases that have been discussed in Chapter I, are distinguished from each other on syntactic as well as semantic criteria. However, the distinction between A and D is motivated by syntactic consideration only (II.1.1).

In so far as the semantic justification for cases is concerned, O appears to pose a problem. Its definition remains imprecise and its use as a 'waste-basket'² implies that there is some element of

1. Fillmore, C.J., (1968a), p. 5: cases are 'semantically relevant syntactic relationships'.
id. (1971), p. 245: 'deep structure cases ... could be discovered and justified by syntactic criteria ...'; pp. 246-247 also.
It appears that Robinson, J.J. (1969) is not correct when she says that in FCG cases are syntactic primitives (p. 62).

2. Fillmore, C.J., (1971), p. 251.

indeterminacy in the specification of this case-category.

Again, there are certain constructions in which a case-category (e.g. O/I) is not consistent in its syntactic behaviour (e.g. in relation to the process of passivisation: II.2.1.3.1, II.2.1.3.2, II.3.2.2). This inconsistency may be accounted for by certain features on the lexical items or the lexical items themselves. However, *it* indicates that the cases by themselves are not adequate. If ad hoc features need to be specified then the major justification for cases, seems to disappear.

In certain constructions (II.4.7.2), there is semantic distinction between surface-realizations of the same case-category. There appears no way to account for this except in terms of their morphological characteristics.

VII.3. The proposal of FCG that 'case-form's or 'surface-cases' are language-specific and may be realised by different syntactic devices like inflexion, pre-/post-positions, word-order, (which is, of course, mentioned by others as well: (I.2.4, f.n.68) appears to be correct.

VII.4. FCG maintains that there is one occurrence of a case in a simple sentence. But there are instances where this principle breaks down.

Cases like L and Pa (II.4.4, II.4.8) appear to go against this principle of 'one-instance-per-clause'. The case-category I indicating emotive states also poses difficulty (II.3.4) as there are simple sentences which allow two occurrences of I. Even the proposal of deriving such I's from superordinate structure does not help.

To get round the above problem, it is suggested that this non-application of the principle may be considered specific to L, Pa and I.

VII.5. The position of FCG that relationships involving subject and object are surface-phenomena, appears to be correct and no problem with regard to it, has arisen in this analysis.

VII.6. FCG proposes that 'there can be compound instances of a single case (though noun-phrase conjunction)' in a simple sentence. This proposal appears to hold good only when a sentence with conjoined noun-phrases representing the same case, contains a single verb.

VII.7. In addition to the above (VII.1-VII.6), there are a few points that need to be mentioned.

VII.7.1. It has not been possible to justify a case-category like Com(itative). Comitative constructions are derived transformationally and are related to constructions containing A/O/F/R (V.7.3).

VII.7.2. In the case of NP-asti-NP sentences (Chapter III), Es and T appear to be different from other case-categories, with regard to case-specification (III.1.1, III.1.2).

VII.7.3. Lastly, in so far as the descriptive adequacy of FCG (I.1.3.1) is concerned, the analysis in the foregoing chapters, is an insufficient evidence for saying anything conclusive. However, FCG appears to be observationally adequate for the description of the Sanskrit language.

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